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and Medical News

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'Cure' Is Held Possible In Most Child Sarcomas

Medical Tribune Report

LOS ANGELES—Management of soft-tissue sarcomas in children has reached the point where "cure" can be accomplished in many, if not most, cases, providing the cancers are diagnosed early enough, the seventh National Cancer Conference was told here.

Detailing "great progress" in the treatment of soft-part sarcomas, the third commonest group of solid tumors in children, Dr. Philip R. Exelby, of New York's Memorial Hospital for Cancer and Allied Diseases, said that fibrosarcoma management now has an "expected cure rate of about 90 per cent" with surgery alone, and rhabdomyosarcoma a cure rate of 60 per cent.

"It is gratifying in the year 1972 to be able to use the word 'cure' for these tumors," Dr. Exelby said, noting that, if untreated, most children with soft-tissue sarcomas die within 12 months of diagnosis. **"We are now thinking beyond the cure of cancer to the quality of survival of these children,"** the physician continued. **"This means we are designing our surgical treatment to be less mutilating, preserving extremities wherever possible. We are designing radiation therapy fields and chemotherapy regimens so that cured children will not be crippled by the long-time side effects of these treatments."**

DR. EXELBY

He stressed that this does not mean treatment is "any less radical" than hitherto.

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Toronto Study On Vitamin C Backs Pauling

Medical Tribune Report

TORONTO—The results of a large double-blind trial have completely removed the doubts of a team of Canadian investigators regarding Dr. Linus Pauling's claims that vitamin C gives therapeutic protection against the common cold, a member of the team, Dr. T. W. Anderson, Associate Professor of Epidemiology and Biomatrics at the University of Toronto, told MEDICAL TRIBUNE.

DR. ANDERSON

"We were skeptical of Dr. Pauling's claims when we started the trial," he said, "but the results of the study have made that skepticism disappear."

Dr. Anderson stated, however, that while "a firm recommendation" on the use of large doses of ascorbic acid in the prevention and treatment of colds cannot be made until certain questions are answered, "the results of our trial have encouraged us to conduct an even larger trial this winter to seek the answers to those ques-

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San Antonio Diphtheria: Surprises, Dilemmas

Medical Tribune Report

When diphtheria struck San Antonio, Tex., clinically it held surprises—and dilemmas.

A yellow pharyngeal membrane? Diphtheria? But diphtheria is supposed to be distinguished by a greenish membrana.

"If I had seen these cases in the emergency room when I was in Denver I would never in my life have thought it was diphtheria," states Dr. Jerry J. Eller, head of pediatric infectious disease, University of Taxas Medical School at San Antonio.

Yet during the 1970 diphtheria epidemic in San Antonio, a yellow membrane was a presenting sign in many patients who came to the affiliated Bexar County Hospital with what turned out to be diphtheria. And therapy in this life-threatening disease rests on the clinical diagnosis. It still is a sign, during the winding down of the epidemic.

"We all learned a great deal clinically," states Dr. Richard V. McCloskey, then head of infectious diseases. "We began to pick up the disease very, very early and to anticipate complications."

Drs. McCloskey and Eller collaborated in the care of all diphtheria inpatients in Bexar County Hospital—connected by a third-floor ramp to the medical school. "Disciplinary lines became blurred," says Dr. McCloskey. Although he was in the department of medicine and Dr. Eller in

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the department of pediatrics, they together worked out the management protocol for both the children and the adults who besieged the hospital with diphtheria. They frequently consulted on "results of cultures, how many family members of so-and-so we didn't get treated, how so and so is doing, what we should do with so-and-so," Dr. McCloskey relates. The hospital's isolation unit in medicine—on the 10th floor—that Dr. McCloskey headed accommodated older children from the overflowing special diphtheria ward set up in pediatrics—on the fifth floor.

"The membrane," Dr. McCloskey learned, "may be small." Nausea, vomiting, headache, and chills were among the presenting complaints even in those in whom the lesion was not extensive. Dyspnea was a symptom in several children and in one adult with "an extremely exuberant membrane." Dysphagia was frequent—although "many physicians would put severe pain upon swallowing as a very uncommon symptom of diphtheria." Several patients were prostrated on admission.

"The spectrum of the disease is very wide—on the one end a local infection that is entirely asymptomatic and on the opposite end a devastating disease that progresses relentlessly and kills by destroying heart muscle and/or obstructing respiration."

Sometimes at admission "the child is coughing up blood and chunks of membrane dislodged by the coughing, is short of breath and exhausted."

Another observed phenomenon in San Antonio was a unilateral or bilateral swelling localized in the upper portion of the neck, with the area "looking as if someone had erased the anatomic boundaries." The "erasure edema"—the description coined

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Tuskegee Study End Immediately Urged By Citizens' Panel

Medical Tribune Report

WASHINGTON—An immediate termination of the Public Health Service's 40-year-old Tuskegee syphilis study was recommended here by a nine-member citizens' panel set up to investigate the study. And Dr. Merlin K. DuVal, HEW assistant secretary for health and scientific affairs, said the recommendation would be implemented "as rapidly as possible."

DR. DUVAL

Dr. DuVal also backed panel recommendations that the surviving participants in the study receive any necessary medical care and that a Select Specialists Group be appointed to supervise treatment.

The probe of the Tuskegee study followed disclosures that the majority of 412 syphilitic black male participants had not been treated even after penicillin was found to be an effective cure. Approximately 75 are still alive.

PHS maintained "a continuous policy

Continued on page 19

What's New and Important in Treating Gout? Dr. John H. Talbot Responds to Questions, P. c. 5

Surgery for Ulcers Ruled Out As Cause of Damage to Liver

Medical Tribune World Service

PRAGUE—Liver damage found in patients operated on for duodenal ulcers or following Billroth resection of the stomach cannot be attributed to surgery, according to Prof. E. H. Schriefers, of the State Hospital, Koblenz, West Germany. On the contrary, he believes that surgery may hava a protective influence.

He reached this conclusion, reported to the 14th Czechoslovak Congress of Gastroentcrology here, on the basis of a study of 1,000 patients from various clinics who had been operated on for gastric or duodenal ulcers or both and 250 ulcer patients who had not undergone surgery. One or more liver biopsies had been carried out lo avery case.

Pathologic Changes Found

Pathologic changes in the liver were found in 286 (28.6 per cent) of those who bad been operated on (hepatitis 12.7 per cent, fatty degeneration 12.2 per cent, cirrhosis 3.7 per cent) and in 48.8 per ceot of nonoperated patients (hepatitis 9.2 per cent, fatty degeneration 32.8 per cent, cirrhosis 6.8 per cent). Consequently, the operation could not be held responsible for the damage, he said.

Possible pathogenic factors that might explain the liver damage in the first group were preoperative hepatitis (10 per cent), postoperative hepatitis (25 per cent), bileduct disorders (9 per cent), alcohalism (29 per cent), rapid emptying of the stomach after Billroth resection (20 per cent), bleeding and perforation of the ulcer (28 per cent), and dinbetas (8 per cent).

In the group of 714 surgical patients in whom there was no or almost no liver dsmage, the incidence of all these factors was considerably lewer except for preoperative hepatitis and rapid emptying.

In 141 postoperative patients, in snme of whom surgery had been performed ns long ago ns 22 years, and in whom two to four biopsies hud been carried out in the follow-up period, Dr. Schriefers fnund that the liver had improved in 77 cases, remained unchnnged in 52, and was worse in only 12.

Coauthors were Drs. A. Luchmann and U. Hardt.

■

Typhus Decreasing in Burundi, But Rate Is Still World's Top

Medical Tribune World Service

GENEVA, SWITZERLAND—The incidence of typhus in Burundi fell by half between 1970 and 1971, but it wns still the highest in the world, according to the World Health Organization here.

The country reported 7,500 cases inst year. Its Government is being advised on typhus control by the WHO, as is neighboring Rwanda, which had 1,300 cases. Ethiopie has reported between 2,000 nnd 3,000 cases every year since 1950.

Ketamine May Increase Pressure Of Uterus in Early Pregnancy

Medical Tribune World Service

KYOTO, JAPAN—While halothane and methoxyflurane relax the muscle tone of the uterus during the eighth to 18th weeks of pregnancy, ketamine has the opposite effect during this period, a study presented here confirms.

In n paper to the fifth World Congress of Anesthesiologists, Dr. Snmucl Galloon, of the University of Toronto, reported that uterine pressure was measured in 25 patients having abdominal hysterectomies for termination of pregnancy in the eighth to 18th week of pregnancy.

Recordings of uterina pressure in all 12 patients given ketamine alone showed that ns soon as the drug was administered, the base-line pressure increased markedly and frequency and intensity of individual contractions increased.

A depressant effect on uterine pressure was consistent in all patients given 1 per cent halothane or 0.5 per cent methoxyflurane.

■

Mexican Cardiologist Attacks 'Obsession' With Cholesterol

Medical Tribune World Service

MADRID—A sharp criticism of the "current obsession" with cholesterol, particularly in the United States, was made here by the head of Mexico's National Institute of Cardiology.

"Low-fat diets popular in the United Sintes have n preventive action, but they do not cure angina pectoris, hypertension, heart-failure, end cardiec insufficiency," Dr. Pedro Sodi Pallarea told the nixth European Congress of Cardiology here.

"The main enemy of the beart," he said, "is sodium, rather then cholesterol. Potassium choride is the beart's beat friend."

Surgeon's Forerunner

Wide Photo

In the transition from medieval barber-surgeon to 19th-century university-trained surgeon, military medical personnel in Europe were given the name *Feldsher*, German for field barber. Their appearance was not unlike this 17th-century *Feldsher*, which is on display at Zürich Medical Museum.

Japanese Warned of Ultrasonics In Treating Expectant Mothers

Medical Tribune World Service

TOKYO—Japanese obstetricians and gynecologists have been warned against the use of ultrasonic diagnostic apparatus when treating expectant mothers during the first three months of pregnancy.

The warning, by the Japan Association for Maternal Welfare here, followed a report from Hukkaido University School of Medicine that such devices induced birth defects in mice.

The Hokkaido investigators found that three out of 51 mice treated with a commonly used ultrasonic device in early pregnancy gave birth to anteneephalic offspring.

■

Horn Honkers Restrained

MADRID: Vehicle horn blowing will be prohibited here beginning July 1. The ban follows an antinoise campaign in which physicians played a major role.

■

Advance in Microsurgery Reported in Restoration Of the Fingers and Hands

Medical Tribune World Service

MELBOURNE, AUSTRALIA—Steady progress in techniques of restoration of fingers and hands is reported from a research and clinical microsurgery program at St. Vincent's Hospital here.

In the last two years the team has applied microsurgery to restore 27 amputated fingers and four amputated hands.

The research leader of the team is Dr. R. C. Bennett, Professor of Surgery at the University of Melbourne, and the clinical head is Dr. B. O'Brien, of the hospital's department of plastic surgery.

A key feature of the work has been the development of a delicate nylon thread with a sharp metalized tip that is used instead of a separate needle to avoid unnecessary damage in sewing the tiny vessels under the operating microscope.

Operation Takes 8-10 Hours

Each operation takes from eight to 10 hours and requires at least six persons (four surgeons and two operating-theatre nurses). Usually, the work proceeds in two teams, one preparing the severed part and the other the patient. Generally, six to eight sutures are used for each severed vessel or nerve. In the first operation, circulation is restored to the severed part, and later operations are programmed to repair tendons and bones.

Dr. Bennett commented: "I think the results so far have been very useful from the viewpoint of functional restoration. Considerable partial restoration of sensation and movement has occurred in some patients, particularly in the fingers, and is now remains to assess the long-term results very critically because improvement is frequently continuous."

■

Histoincompatibility Tied to Fetus Rejection

Medical Tribune World Service

TEL AVIV, ISRAEL—Spontaneous nbortion is often due to histeincompatibility between husband and wife, Isnac Halbrecht, hoad of the department of obstetrics and gynecology of the Sharon Hospital in neanby Petah Tikva, told an International Seminar on Gynecologic Endocrinology and Reproductive Physiology.

Dr. Halbrecht, who is also Professor of Obstetrics and Gynecology at the Tel Aviv University Medical School, based his project, being conducted at Sharon Hospital, on the following premises: a fetus is a "homograft" containing antigens and should theoretically be rejected by the mother; in most cases it is not rejected due to a protective mechanism that begins functioning whan the mother becomes pregnant; and habitual abortion indicates a pathologic breakdown of this protective mechanism.

Histocompatibility of husband and wife was determined by using a joint husband and wife lymphocyte culture—the same method used to determine the compatibility of transplants.

Tendency to Abort Foraaeenbla

Tests showed that when the lymphocytes of husband and wife were incompatible, the wife often suffered habitual abortions. Moreover, and most important, her tendency toward habitual abortion could be determined before marriage, Dr. Halbrecht said.

"As a rule, only 3 to 4 per cent uf the small lymphocytes develop into blastlike cells," he said. "In cases of habitual abortion, the percentage increases manyfold, anywhere from 10 per cent to 30 per cent."

The same results were found in hydatidiform moles, in which transformation tests proved to be positive. Moreover, a complement-fixing antibody was found, probably due to a new antigen that had been formed in the pathological placenta uf hydatidiform moles, Dr. Halbrecht related.

"At present, we have no advice to offer couples who are histoincompatible," he commented. "The research project is continuing with special interest to discover how the protective mechanism which prevent abortions acts."

Understanding it may have implications not only in the field of transplants but also for the problem of cancer rejection, he said.

A CLINICAL NEWS NOTE: *"A satisfactory response to a full course of colchicine, the demonstration of hyperuricemia, a family history of gout, and the passage of a uric acid stone are helpful criteria [in the diagnosis of gout]." (Dr. J. H. Talbott, page 5.)*

NEWS INDEX

FEATURE INDEX

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Keratoconus Treatment Gives Favorable Result

Medical Tribune Report

DALLAS, TEX.—The treatment of keratoconus by a new technique, thermokeratoplasty (TKP), which consists of the application of heat to the cornea to shrink its collagen fibers, achieves results that are "most satisfactory" and that compare "very favorably" with those attained by penetrating keratoplasty, according to a team of investigators at the University of Florida College of Medicine.

The TKP procedure, they said, seems at this time to be safer, easier, and cheaper and, should the necessity arise, does not preclude keratoplasty. "Even more, it eliminates most of the classical complications in penetrating keratoplasty, such as graft reaction, poor healing, wound dehiscence, and fixed dilated pupils," the investigators told a meeting here of the American Academy of Ophthalmologists and Otolaryngologists. Visual acuity and ability to tolerate contact lenses after the procedure, they added, seem to be at least as good as would be obtained after penetrating keratoplasty.

10 Patients In Their Study

In their study were 10 patients with keratoconus in whom visual acuity could not be corrected by conventional methods and who preferred the new experimental procedure as an alternative to penetrating keratoplasty. They were legally blind, with 20/200 vision or less in the affected eye. Hnlf could see only sufficiently to detect hand movements or count fingers; at least five of them were unable to tolerate contact lenses.

In the procednre, with visualization throngh an operating microscope, the thermokeratophora, or heating probe, is applied to tha desired site, which continuously raeives normal saline, tha investigators explained. After the desired flattening of the cornea, the operation is halted and the burned epithellum is removed with a sterile cottan swab applicator. In most nf the patients a Griffin bandage lens was placed in the eye after previous soaking in neosporin.

Recently, they noted, the samo technique has been performed at a slit lamp without retrobulbar anesthesin or surgical preparation. The postoperative eaurse has been uneventful with only minor discomfort for about 24 hours. Only aspirin was used as an analgesic in most patients. No cases of infection, recurring ulcers, or severe uveitis have been seen, the investigators said.

In all cases the cornea was significantly flattened, to less than 40 diopters by keratometric readings.

Optical correction, usually in the form of a contact lens, was given most patients by the third to sixth postoperative weeks, they reported.

Because the temperature, site and duration of applicstion, and follow-up varied significantly in the patients, results were divided into two main groups.

In all five patients treated with 130° C. probe temparature with a short-time application and who were followed from eight to 12 months, visual acuity improved to better than 20/40 with contact lenses, it was reported. The investigators cited the case of a 23-year-old man, with a 13-year history of keratnconus, whosc visual acuity in tha left eye was sufficient only to caunt fingers and who had extreme difficulty wearing hard or soft cntact lenses. Nine months after TKP treatment, visual acuity was 20/20 with a soft cantact lenses. "The cornea was flattened at least 13 diopters in bath meridians, with a parallel reduction of the refractive error of about 15 diopters," they reported. They added that there is little if any corneal haze after the procedure.

In five patients, treated with a temperature of about 90° C. with a longer time of application, who were followed for less than six months, visual acuity was also improved to 20/40 or better with contact lenses.

The results, however, were not as predictable, the investigators said. "Since there was a considerable flattening of the cornea with time in our first group, a definite conclusion cannot be made at this time. However, it seems that the results obtained with the lower temperature and longer application are no aa predictable," they said.

Side Effects May Be Sean

The investigators cautioned that new side effects due to the TKP procedu re may ba seen with longer follow-up. They added that while the procedurc ahows promise, "until the techniques are further developed and the patient observed for a longer period of time, its use should be restricted."

The authors nre Drs. Antonio Gassel, Edward L. Shaw, Herbert E. Kaufman, Motokazu Itoi, and Takashi Sakimoto and Yasuo Ishii, a technician.

Flat-tipped heat probe, top, ready to be applied to bulging cone-shaped cornea in thermokeratoplasty procedure. Bottom, reshaped cornea after application of probe. More spheric cornea improves vision and can tolerate contact lenses.

Hepatitis, Obstructive Jaundice Told Apart

Medical Tribune Report

SAN FRANCISCO—A look at the white blood count can help differentiate hepatitis from obstructive jaundice, a computerized study by Dr. Dennis Venzon at the Penrose Hospital, Colorado Springs, has shown.

He also found that, contrary to widely held opinion, the per cent of conjugated serum billrubin is of no value in making the differential diagnosis.

Speaking at a meeting of pathologists here, Dr. Venzon said that a retrospective study of 69 patients showed that, "surprisingly, the W.B.C. was as good as alkaline phosphatase" in determining which ones had obstructive jnundice and which had hepatitis.

"This does make sense, however, because obstruction leads to leukocytosis, and viral infections may lead to leukopenia," he observed.

The value of the W.B.C. has since been corroborated, he added, in 15 difficult casea in which the computerized diagnosis was later confirmed by either biopsy or surgery.

His study showed, he said, that the most important criterion of all was age, with more hepatitis seen under age 44 and more obstructive jaundice over that age. For hepatits, the mean nge was 27.9, compared with 63 for obstructive jaundice.

Next to age in importence was the SGOT, with a mean value of 515 International units in hepatitis and 72 in obstructive jaundice.

Alkaline Phosphatnaa Significant

The third most significant value wan alkaline phosphatnse, with a mean value of 22.4 King-Armstrong units in hepatitis and 38.3 in obstructive jaundice.

The fourth major criterion was the W.B.C., which had a mean value of 6,310 in hepatitis and 8,690 in obstructive jaundice.

Dr. Venzon said that these individual values should be considered in making the differential diagnosis of these two liver diseases, even without a computer, but that a computer profile of the four values is most halpful.

Dr. Venzon spoke at a joint session of the College of American Pathologists and the American Society of Clinical Pathologists.

Gonorrhea May Be an 'Inciting Agent' Leading to Cervical Cancer Incidence

Medical Tribune Report

MELVILLE, N.Y.—The possibility that gonorrhea may be one of the "inciting agents" that lends to cervical cancer is suggested in a report issued here by the National Cancer Cytology Center.

Observations made of seven patients with proved cervical gonorrhea were cited as evidence for this hypothesis by the authors of the report—Drs. Carl T. Javert, of Columbia University College of Physicians and Surgeons, and J. Ernest Ayre, president and medical director of the center.

The appearance of cells in all seven cases indicated an acute inflammatory process of neisserian nature. There were numerous giant nucleated cells that exhibited feetures commonly nssociated with cervical dysplasia and virus activity. Cell changes similar to those seen in infection with the herpesvirus type 2 H. hominis were also observed.

Drs. Javert and Ayre pointed out that a relationahip between this virus and cancer of the cervix has been postulated by many investigators during recent years.

"It may well be," they said, "that the gonococcus exhibits some individual carcinogenic potential of its own or that it represents a viral vector playing an etiological role in the development of cervical dysplasia and carcinoma in situ of the cervix."

In their view, the virus quite possibly rides in "piggy back" on the gonococcus. A plausible explanation might be that the acute, subacute, or chronic phase of gonorrheal infection facilitates entry of the herpesvirus into the tissue cells, they said.

ECTOPIC BEAT

"Research experimeots conducted by Prof. Leo DiCara of the University of Michigan Medical School show that humans may be able to acquire control over their visceral functions than medical authorities have previously suspected."

—release from the University of Michigan.

Now if we cao only acquire some control over proofreaders.

(Regular beat: Immuterin Medica, page 21.)

Counterpulses Aid Prognosis In Shock Cases

Medical Tribune Report

SAN FRANCISCO—A noninvasive, short-term method of counterpulsation external circulatory assistance has produced a marked improvement in the prognosis of patients in cardiogenic shock, the American College of Surgeons was told here.

Dr. Harry S. Soroff, director of surgical servicea at Tufts University, added that the method may be of use in infarction patients not in shock, as well as in angina patients.

In a series of 25 patients in cardiogenic shock, Dr. Soroff ssid, 13 died, a mortality of 52 per cent. Previously, he observed, the expected death rate, despite "rigorous medical management," was 85-90 per cent.

In the counterpulsatiou procedure, the legs are encased in rigid metal housings that heve a water-seal system. Pressure on the limbs within the housings is synchronously pulanted from 250 mm. Hg above room pressure on diastolc to 50 mm. Hg below on systole.

The effect, Dr. Soroff explained, is to enable the left ventricle to discharge a greater stroke volume with less effort. Additionally, the elevntion of the diastolic pressure preferentially increases coronary blood flow. Systemic circulation is augmented, and cardiac output and peripheral perfusion increase, with no energy cost to the heart.

Effective for Modarate Shock

The counterpulsstion treatment, Dr. Soroff remarked, "appears to be effective for patients who are in moderate shock."

"It was our impression that those who died were in somewhat more profound shock than those who lived."

He noted, however, that there were no significant differences between those who died and the survivor groups in terms of mean age, size or location of infarct, or incidence of pulmonary infection.

Treatment of the 25 patients, with a portable unit on an emergency basis, Dr. Soroff said, began an average of eight hours after the patieot entered shock.

The average duration of therapy among the survivors was three hours. Although some of the patients were treated for as long as 24 hours, Dr. Soroff observed that "it really doesn't take much time, in those patients who are going to respond and survive, for them to show this."

Date from rabbit experiments suggest, he said, that "the earlier counterpulsation is applied, the more myocardium can be preserved.

"We feel, and are organizing a study to prove this, that patients with myocardial infarction not in shock should have this treatment applied at the time they are admitted to the hospital."

Coauthors were Dr. Charles T. Cloutier, William C. Birtwell, Dr. John S. Banan, Dr. Alfred H. Brille, Linda A. Begley, R.N., Phyllis Childs, and Dr. Joseph V. Messer.

Minorities' Training Financed at Harvard

Medical Tribune Report

BOSTON—A three-year, $1,135,000 grant has been received by the Harvard University Summer School from the Department of Health, Education, and Welfare to give minority-group students premedical training and career counseling in the health professions.

The grant provides the funds to support 150 students each year in the eight-week program. In operation since 1969, it has been financed up to now by private foundation gifts and by the school itself. Its purpose is to make "medicine and dentistry viable, realistic career choices for the large number of students who might have the potential for such careers" but have not had the necessary encouragement, exposure, and academic preparation.

What's new and important in treatment of gout?

The Consultant
DR. JOHN H. TALBOTT
Clinical Professor of Medicine, University of Miami School of Medicine, Miami, Fla.

THE DEVELOPMENT of allopurinol nearly a decade ago provided another highly useful drug in the antigout category which makes this disease the most satisfactory to treat of the several common types of joiot disease.

The probability that phosphoribosyl transferase deficiency might play a role in the etiology of gouty arthritis has not been substantiated. The search for another enzyme deficiency associated with increased uric acid production seems unlikely but should oot be dismissed.

The use of home dialysis or kidney transplaotation in a patient with advanced renal insufficiency and gouty arthritis has been life-maintaining in a few instances.

A contioued coocentration of interest in the metabolism and recal exchange of uric acid is expected, as well as the search by the pharmaceutical industry in perfecting oawer drugs for the control of hyperuricemia or the management of acute gouty erthritis. I wish I could be as hopeful in other joiot diseases, particularly rhoumatoid arthritis.

How should one go about differentiating between primary and secondary hyperuricemia? When should the diagnosis of gout be made?

The answer to the second part of the question is much easier than the first. A diagnosis of gouty arthritis should not bo made in the absence of at least one typical attack of acute arthritis in ooo or more of tho peripheral joints of the body. A relatively high incidence of the first acute attack in the great toe remains a clinical axiom. Clearly, one may observe acute attacks of gouty arthritis in the back, the hips, the shoulders, or the cervical spine, but these joints are affected only after the diagnosis has been well established for years and after many attacks in the toes, ankles, knees, hands, or elbows.

In searching for a diagoosis at the time of an ioitial attack of unexplained arthritis, tho identification of urate crystals either freo in tbo syoovial fluid or onguifed within cellular elements plus a satisfactory response to a full course of colcbicine 5-6 mg. over a period of 10-12 hours is most helpful. Most other antiarthritic or aotiioflammatory ageots ero nonspecific. They may or may not provide relief similar to colchicino, but if relief occurs it must be attributed to a nonspecific action of the drug. The action of colchicine io acute gouty arthritis is specific.

Io addition to the characteristic clioical features of an acute attack of gout (sudden ooset of acuto pain, usually to a periphoral joiot in a male, with the cardinal sigos of ioflammation, redoess, swelling, heat, and pain), e satisfactory response to a full course of colchicioe, tho demoostratioo of hyperuricemia, a family history of gout, and the passage of a uric ecid stooe are helpful criteria. Osseous tophi in the joints by x-ray and subcutaneous tophi evident on inspection are relatively late manifestations and need not be anticipated early in the course of the disease.

The differentiation between primary and secondary hyperuricemia is evident in a percentage of cases only. Thus hyperuricemia associated with a blood dyscrasia, such as polycythemia vera, myelofibrosis, or one of the leukemias, most likely is secondary. Also the development of hyperuriecmia following the administration of a number of drugs notable in this category are the thiazides, pyrazinamide, furosemide, ethacrynic acid, and possibly levodopa. The development of hyperuricemia in a relative of a gouty family may be presumed to be primary.

When should primary hyperuricemia be treated with uricosuric agents or allopurinol if there has been no episode of arthritis?

There are several critical categories that probably should receivo prophylactic thorapy. A young male under the ago of 30 with a strong family history and e sorum uric acid above 9 mg. (assuming the lower limits of the gouty begin at 7.5 mg.) should receive probenecid 0.5 Gm. daily. All persons with uric acid above 10 mg. confirmed on two or more exeminations or a chronic urato stone former should receive 100-200 mg. of allopurinol daily. Stone formers nnd those receiving probenecid should be cautioned regarding a liberal fluid intake to ensure a liberal urine output.

When should secondary hyperuricemia be treated with uricosuric agents or allopurinol if there has been no episode of arthritis?

A pationt with leukemia and secondary hyperuricemia should receive 200-400 mg. of allopurinol daily in tho absence of an attack of arthritis. A modest hyperuricemia from one of the other blood dyscrasias or hyperuricemia following thiazide thorapy should receive probenecid 1.0 Gm. end colchicine 1 mg. daily and a liberal fluid intako.

If an acute attack of gouty arthritis develops in a patiect receiving thiazide but not on antigout drugs, the patient may continue his thiazides without compromise and should suffor no inconvenience from acute attacks of gouty erthritis if the prophylactic regimen is started.

Continued in next issue.

Next Week

- When hyperuricimia in a gouty patient has been brought down to normal levels, is it advisable to discontinue prophylactic colchicine?
- Now that several agents are available to treat gouty arthritis, how do you rank them?

COMING NEXT ISSUE

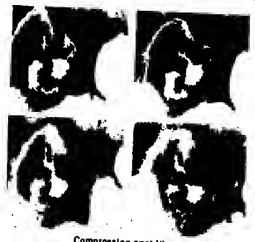
- **Atherosclerosis**
  Guidelines advanced for identifying child at high risk.
- **Cirrhosis of liver**
  New technique controls bleeding of esophageal varices.
- **Bronchitis**
  Smoking plays greater role than dust exposure in miners.

Excessive Anxiety in the Duodenal Ulcer Patient...

The Somatic Protest

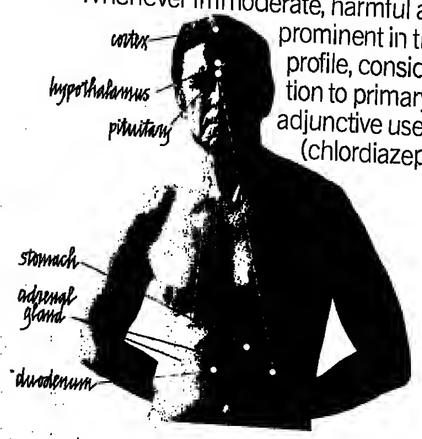
The contributory role of anxiety in the pathogenesis and exacerbation of peptic ulcers is well established. Thus, excessive emotional tension and anxiety are believed to cause adverse changes in the physiology of the stomach or duodenum. Although the exact mechanism of these changes remains to be elucidated, it appears probable that the central nervous system as well as its chief neural and humoral outflows are involved. In many patients with duodenal ulcer, gastric hypersecretion and intestinal hypermotility are the end-organ manifestations of these processes and usually give rise to the typical symptoms of duodenal ulcer.

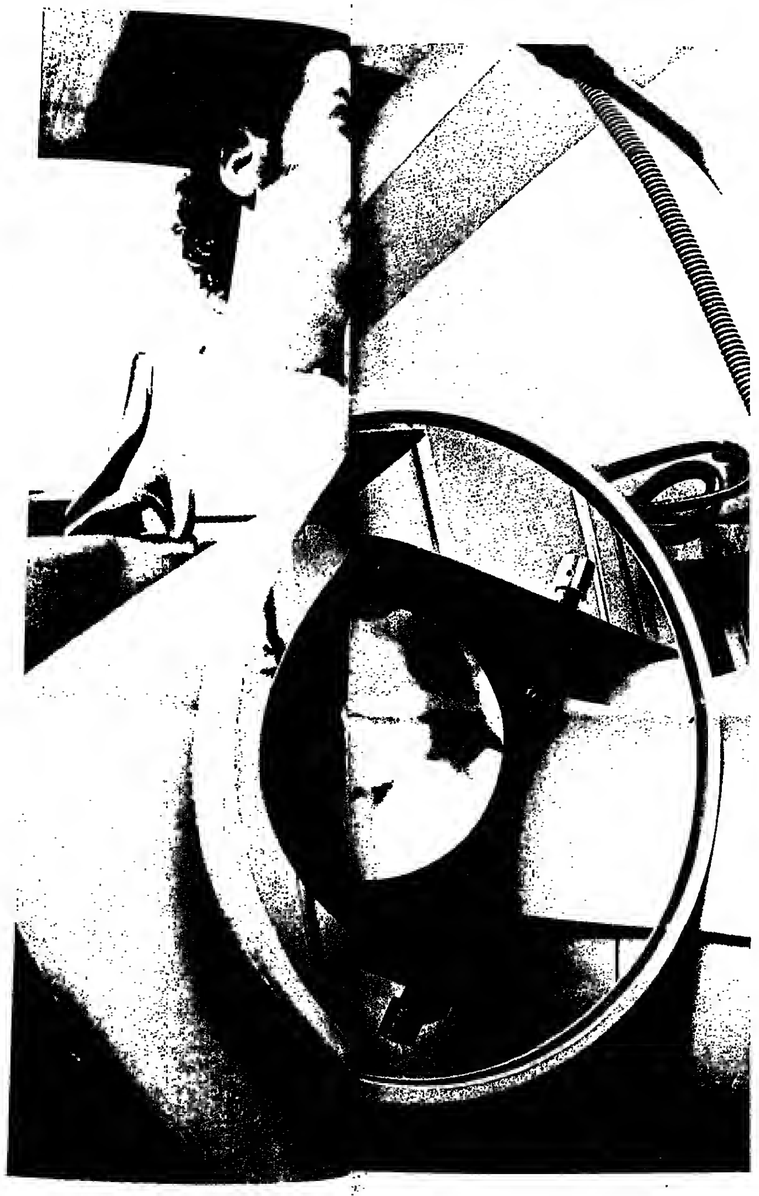
Large ulcer in the midportion of the duodenum well demonstrated on spot films



Compression spot films of duodenum

Whenever immoderate, harmful anxiety is prominent in the clinical profile, consider — in addition to primary therapy — the adjunctive use of Librium (chlordiazepoxide HCl) to effect reduction of anxiety-linked gastrointestinal complaints or symptoms. Librium (chlordiazepoxide HCl) is used concomitantly with certain specific medications of other classes of drugs, *e.g.*, anticholinergics and antacids.





Librium has an excellent record of *effectiveness with safety*. After more than 12 years of wide clinical use, experience with Librium continues to reflect its favorable therapeutic index. In general use, the most common side effects reported have been drowsiness, ataxia and confusion, particularly in the elderly and debilitated. When excessive anxiety has been reduced to appropriate, tolerable levels, therapy with Librium should be discontinued.

For moderate to severe anxiety adversely affecting gastrointestinal function

adjunctive

Librium® 10 mg

(chlordiazepoxide HCl)

1 or 2 capsules t.i.d./q.i.d.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of anxiety and tension occurring alone or accompanying various disease states.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependance have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

Supplied: Librium® Capsules containing 5 mg, 10 mg or 25 mg chlordiazepoxide HCl. Libritabs® Tablets containing 5 mg, 10 mg or 25 mg chlordiazepoxide.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

SURGICAL NOTES

The following notes are from reports presented at the 58th annual clinical congress of the American College of Surgeons, held in San Francisco.

Ischemic Leg Scanning

Scanning with radioactive microspheres for predicting the potential for healing in an ischemic leg was described by investigators at Johns Hopkins University School of Medicine.

The procedure is based on the premise that microspheres labeled with technetium^{99m} injected into the femoral artery are distributed to the distal capillaries in direct proportion to the blood flow, which can be quantitated by gamma counting scans. The ratio of counts bordering a lesion to counts 2-3 cm. away represents the patient's ability to develop hyperemia —"an essential part of inflammation and healing," they said.

Of 21 patients whose limbs were in jeopardy, 13 demonstrated hyperemia in the area of ischemic lesions and all healed with conservative therapy. The other eight showed no increase in blood flow and seven had nonhealing or rapid progression of the lesion.

The authors were Drs. Timothy J. Gardner and N. David Greyson, Buck A. Rhodes, Ph.D., and Dr. G. Melvilla Williams.

Extensive Liver Disease

Oxygen needs should be considered in the management of patients with extensive liver disease or injury, according to Drs. Theodore R. Sobrock and Thomas K. Hunt, of the University of California School of Medicine, San Francisco, who reported a study demonstrating that hypoxia impairs regeneration of the injured liver in rats.

The animals were subjected to 68 per cent hepatectomy and placed in a chamber with the desired amount of oxygen. Hypoxia, it was found, depressed DNA synthesis. Animals on 8 per cent O_2 became severely acidotic and 67 per cent died. Those breathing 12 per cent O_2 developed no acid-base abnormalities, and none died.

Dog Heart Transplant

Successful orthotopic transplantation of canine hearts after in vitro preservation for 24 to 28 hours was reported by investigators at the National Heart and Lung Institute, Bethesda, Md. Heretofore, they noted, success has been rare in hearts preserved more than 12 hours.

The hearts were preserved by hypothermic perfusion with an oxygenated electrolyte solution resembling extracellular fluid. All of seven consecutive recipients survived for 30 hours or more, and three of these dogs survived to rejection.

The authors were Drs. Jack G. Copeland, Michael Jones, Roger Spragg, and Edward B. Stinson.

Hepatic Surgery Eased

The carbon dioxide laser shortens the time of hepatic surgery and decreases morbidity, according to animal studies reported by Cincinnati investigators.

Dogs were heparinized and underwent partial hepatic lobectomy to control hemorrhage produced by simulated blunt trauma. Liver incisions were made by the cold knife, the Bovie electrosurgical scalpel, or a focused high-output carbon dioxide laser scalpel. The laser showed superior hemostatic capabilities both in the speed of coagulation when compared to the cold knife and in total blood loss when compared to both the electrosurgical unit and the cold knife.

The investigators were Drs. James P. Fidler and Richard W. Hoefer, Thomas G. Polanyi, Ph.D., Herbert C. Bredemeier, and Drs. Vinton E. Siler (deceased) and William A. Altemeier.

Limit on Surgery to Certified Surgeons Asked

Medical Tribune Report

SAN FRANCISCO—The practice of surgery, the new president of the American College of Surgeons advocates, should be restricted to board-certified surgeons, and the number of surgeons should be limited.

Otherwise, Dr. William P. Longmire told the College's Clinical Congress here, the increasing number of new physicians being turned out by the nation's medical schools "may just further engorge" a field of medicine that is already crowded.

DR. LONGMIRE

"Surgery now is done by an amorphous mass of physicians," said Dr. Longmire, who is Professor of Surgery and chairman of the department at the University of California School of Medicine, Los Angeles. "Some are certified, and some are not."

According to some estimates, as much as half of all surgery performed in the U.S. is being done by uncertified physicians.

"I think that generally speaking," he said, "we would feel that a trained surgeon is better than an untrained surgeon."

Specialty board certification, "which is the best yardstick that we have available today," and fellowship in the American College of Surgeons should be the criteria of training, Dr. Longmire said.

He proposed that the United States adopt a system similar to that followed by European countries, restricting the number of physicians who can enter specialty training.

Don't Go Where Need Is

"We're tooling up and putting out these thousands of additional physicians," he said, "without any further control over what they do—they just become M.D.s." They do not go, he indicated, where the need is.

For example, he remarked, despite the demonstrated national requirement for more family doctors, "success has not materialized" in the much-publicized campaigns to augment their number.

In California since 1969, he observed, there has been a 14 per cent drop-off in the number of physicians in family or general practice, while a marked increase has occurred in doctors in surgical specialties, internal medicine, and pediatrics.

For surgery in particular, he recommended, the number of physicians needed to perform the "definitive block of surgery to be performed in this country" should be calculated, and only as many as are necessary to meet that number trained.

This could be done, Dr. Longmire said, by limiting the number of residencies approved through the residency review committees in each of the surgical specialties and by confining the practice of surgery to board-certified surgeons.

Of the performance of surgery by noncertified physicians, the A.C.S. president emeritus, "I doubt if you can prohibit this by law." He urged instead the institution of differential pay scales, such as exist in the military and Veterans Administration hospitals and in Canada. This would provide "an incentive to a man, if he wants to do surgery, to become certified."

Dr. Longmire said that such a differential could be established through Federal legislation, such as amendments to Medicare and Medicaid laws. The national health bill sponsored by Sen. Edward Kennedy (D.—Mass.), he noted, includes a provision prohibiting payment for surgery to other than board-certified surgeons.

Many Said to Have Haphazard View of Therapy

Medical Tribune Report

BETHESDA, MD.—Millions of persons in this country make decisions on personal health problems believing that "anything is worth a try."

This trial-and-error approach to such problems is the major underlying cause of questionable health practices in the U.S. population, according to the results of a national study released by the Department of Health, Education, and Welfare.

The study showed that millions of consumers base important health decisions on the idea that in the light of individual difference there is a chance that almost any treatment may be beneficial. Faith in this approach is reinforced by psychosomatic effects and unaided recovery, it was noted.

Some highlights of the study:

- Older people are generally less likely than young people to make irrational decisions on health problems and are more skeptical about efficacy claims for drugstore remedies.
- Forty-two per cent of the persons interviewed, representing 50,000,000 adults, would not be convinced by almost unanimous expert opinion that a hypothetic "cancer cure" was worthless. Only 45 per cent thought such a medicine should be banned by law.
- Three-fourths of the public believe that extra vitamins provide more pep and energy, the most common of the misconceptions investigated in the survey.
- Although their disorders had never been diagnosed by a physician, 12 per cent of those interviewed, representing about 16,000,000 adults, reported they had arthritis or rheumatism, asthma, allergies, hemorrhoids, heart trouble, high blood pressure, or diabetes.
- Twelve per cent of the sample also indicated they would self-medicate—without seeing a doctor—for longer than two weeks for such ailments as sore throats, coughs, sleeplessness, or upset stomach.
- Twenty-six per cent, representing about 35,000,000 adults, had used nutritional supplements expecting specific observable benefits, without a physician's advice.
- About 2 per cent, representing 2,500,000 adults, indicated they did something every day or nearly every day to help with bowel movement and that they were not following a physician's advice.

The research on health practices and opinions was initiated at the suggestion of the Senate Committee on Aging after hearings on how elderly consumers were being victimized by frauds and misrepresentations. The purpose of the survey was to investigate false and questionable health beliefs and practices and the public's susceptibility to them.

Dr. Merlin K. DuVal, HEW Assistant Secretary for Health and Scientific Affairs, commented:

"The attitudes, beliefs, and practices of consumers in regard to health problems are critically important. They involve, for example, such questions as the limitations of self-diagnosis, how long self-medication is continued, and when to seek professional care.

"Too little is known about present-day human behavior in health matters. The report provides us with background for decisions in areas such as health and nutrition education and drug labeling."

The 426-page report, *A Study of Health Practices and Opinions*, was made by National Analysis, Inc., of Philadelphia. The study is based on data from interviews with 2,839 adults in a national area probability sample that was taken during the summer of 1969.

The $157,000 contract for the study was supported jointly by seven Government agencies.

...brief summaries of editorials or guest editorials in current medical journals.

Consumer Participation

"The medical profession has long recognized the value of joint effort with experts in other fields that have common boundaries with medicine in the delivery of health care." And "now that consumers...are becoming more involved in determining the cost, availability, and even the quality of medical care, the medical profession has new partners in decision making."

Recommendations made by a group composed of professional, consumer, and commercial interests "might be more realistic, or at least better accepted (even in allocating research funds), than those made by any of its component individuals or organizations...."

"The community group might also contribute new ideas and information that would help to shape future medical education. Through dispassionate analysis, it might conclude, for example, that we **ought to diminish our present emphasis on long and intensive training for all physicians and turn instead to producing more physicians faster, reserving the longer, more comprehensive education for a relatively few."**

This group might also "choose whether money and personnel should be allotted to spectacular and well-publicized procedures or the kinds of treatment that are less celebrated but far more important medical and economically....Such choices might even be made on the strength of the same facts used by the medical profession in reaching the same decision, yet be better accepted because of the group's greater strength in public relations," Dwight L. Wilbur, M.D., editorial. (*Postgrad. Med. 52:230, September, 1972.*)

Smoking in Irish MDs

A recent survey of physicians in Ireland has indicated that physicians of both sexes smoked significantly less than the general population. There was also a higher percentage of ex-smokers in this group than there was among the general population.

The data are "encouraging. Doctors are gradually stopping the cigarette smoking habit or changing to other forms of tobacco, but this trend is evident among many other professional people and among university graduates in general. It is probable that the cigarette smoking habit started among the better educated people and among those in the more privileged social classes. They popularized a habit which spread widely to all segments of society. It is to be hoped that the example now being set by the professional classes and by the more privileged members of society will be followed with the same success by the entire community." R. Mulcahy, editorial. (*J. Ir. Med Assoc. 65:446, September 2, 1972.*)

Urinary Tract Infections

Many remain unaware of the fact that, despite the most meticulous procedures in bacteriologic laboratories, bacteriologic diagnostics are often inadequate because of poor sampling, poor storage and transport, and misunderstandings regarding "quantitative bacteriology of the urinary tract." Suprapubic aspiration is an excellent method for the diagnosis and control of urinary tract infections. It solves most of the clinician's problems, be they in the hospital or in private practice. The clinician who has problems with "pollution" and does not achieve satisfactory results from urine sampling and control of urinary tract infections should adopt the aspiration method, either in the hospital or in private practice. J. Boe, editorial. (*Tidsskrift for den Norske Laegeforening [J. Norwegian M. A.] 92:28, October 10, 1972.*)

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Vitamin C for the Common Cold Vindicated

OWING TO THE COMBINATION of fewer episodes and fewer days per episode, the difference between the groups was marked in terms of days per subject, particularly days confined to the house, in which the mean figure for the vitamin group was 30 per cent lower than that for the placebo group, a difference which was statistically significant ($P<0.001$)."

This was the essential finding of an exquisitely well-controlled, randomized, double-blind trial of the utility of vitamin C as preventive and therapy for the common cold, reported in the September 23 issue of the Canadian Medical Association *Journal* (see page 1). It was carried out by Dr. T. W. Anderson, Associate Professor, Department of Epidemiology and Biometrics at the University of Toronto; Prof. D. B. N. Reid, of the same department; and Prof. G. H. Beaton, head of the Department of Nutrition at the same institution.

For some years Nobel Laureate Linus Pauling has cited "scientifically valid evidence" that vitamin C, "taken in proper amounts, has the effect of decreasing the incidence and severity of the common cold, whereas the ordinary cold medicines do not have this effect." Pauling has said, "I find it shocking that physicians and nutritionists should misrepresent the facts and should refuse to recognize the value of this important food, vitamin C, in improving health."

Of course, Dr. Pauling is a chemist, not a physician, and his two Nobel Prizes are for chemistry and for peace. His scientific acumen is legendary, and it would seem foolhardy to question his ability to recognize and distinguish valid from invalid data. He has not performed any of the clinical studies but has singled out a number as "well-designed investigations" that demonstrated to his satisfaction the utility of vitamin C for the prevention and treatment of the common cold. Nonetheless, his medical critics have attacked the studies he has selected as "uncontrolled or inadequately controlled." Indeed, a "Current Opinion" guest editorialist in the September 15, 1971, issue of MEDICAL TRIBUNE, in the course of labeling acupuncture as "a powerful placebo," referred to "a prominent scientist in an unrelated field [who] on dubious evidence extols the virtues of vitamin C for the common cold and gains many followers."

It will be extremely difficult for such critics to label the Toronto study as "dubious evidence." It seems likely that the vitamin C controversy will also wind up in that amazing category of striking new advances that are at first treated with derision by contemporary scientists. The authors of the Toronto study themselves admit that they came to scoff but remained to praise.

Educating Your Patients

IN SEEKING TO MOBILIZE government educational action against major killers and disablers, the Public Health Service is preparing ads designed to help the physician educate his patients.

The most recent of these is an informative poster on the hazards of smoking (see page 1). Intended to serve as a teaching tool for use with patients, the PHS poster shows in vivid detail—explainable to a layman—the dramatic anatomic changes occurring in emphysema and their relationship to cigarette smoking. The correlation of anatomic defects with the number of cigarettes smoked daily makes a crucial point.

We are pleased to cooperate with the PHS in making these posters available to physicians. MEDICAL TRIBUNE has, since its inception, consistently backed the need to recognize new priorities in public health measures. The clear-cut relationship of cigarette smoking, not only to heart disease and lung cancer, but to emphysema as well, has caused growing concern in medical and government circles throughout the world. The failure of educational programs to reduce smoking and alcohol use, both of which have been identified as two of the most toxic substances to which man is exposed, has led to the search for new means to arrest the continuing and growing medical toll exacted by these two agents.

The PHS antismoking poster marks a new approach, invoking the direct aid of the physician and offering him a tool for reaching the patient in his office. The personal authority of the physician and the ambience of the office visit, combined with the object lesson offered by the poster, all suggest that this may prove to be an exceptionally useful way to bring the patient a vital lesson in preventive medicine.

The poster is available free of charge to all physicians, and a letter or your prescription blank addressed to

Poster,
Medical Tribune
880 Third Avenue
New York, N.Y., 10022

will bring you a copy or copies, in accord with your request. This important educational material comes with an explanatory summary based on the internationally recognized studies of cigarette smoking and lung disease by Dr. Oscar Auerbach and E. Cuyler Hammond, Sc.D. A.M.S.

External Counterpulsation

CLINICAL QUOTE "... *External counterpulsation is a practical, safe, atraumatic, and effective circulatory assist technique. Early treatment of patients with coronary occlusions may reduce the size of the permanent injury, improve the course of recovery, and reduce the incidence of cardiogenic shock...*" Dr. Harry S. Soroff at the American College of Surgeons meeting; see page 3.)

"A breakthrough at last! We've just made a cold germ nervous."

LETTERS TO THE EDITOR

The Tail That Wagged the Medical Education Dog

Editor, MEDICAL TRIBUNE:

Thanks for your splendid editorial on the full-time professor (MEDICAL TRIBUNE, September 13). I could not agree with you more. I think a perfectly horrible thing is happening in the teaching of medical students today. They are being taught usually by the junior staff and residents and seldom come in contact with the heads of departments or even those of the next echelon. Too many of the senior staff are too busy doing research or traveling, much of which is not worth while. *All of us believe in research, but to let the tail wag the dog, as is now happening, and leave the poor undergraduate student stranded does not lead to good medicine.*

Thanks again for your splendid editorial. I hope it will do some good . . . but I fear it may fall on deaf ears.

ALTON OCHSNER, M.D.
New Orleans, La.

■

Athletes' Osteoarthritis

Editor, MEDICAL TRIBUNE:

Regarding your article on the osteoarthritic problem in athletes (MEDICAL TRIBUNE, October 11), I might add that I enjoy so much the continuing, up-to-date MEDICAL TRIBUNE reports on athletics, I think it does a world of good to hear what others have to say.

I'm not quite in agreement with Dr. Morehouse in that he found no relation to knee instability and ligamentous tearing. I feel that Dr. Morehouse's study, though commendable, did not include other parameters of rotation and of the tibia. Measurements of simple instability in the horizontal plane simply don't tell the story, and I think that the test that we've used to designate loose joints are designed to show all rotational laxity with high or low extremity. Combining extreme flexibility at the hip and ankle on top of some looseness in the knee, in my opinion, does predispose to ligamentous tearing, especially if the patellar tubercle rotates beyond the lateral margin of the patella.

I would agree completely that one type of instability—namely, mediolateral laxity—is not, in itself, an indicator of the potentiality of knee injury, but I can't help feeling that progress continues to show that, when there are three or four parameters of laxity indicative of marked total low-extremity laxity, the ligamentous injury rate is much higher. Studies in the future of this type would be more conclusive if one could study the rotational laxity of the ankle, knee, and hip in an effort to see if one then finds more ligamentous injury.

JAMES A. NICHOLAS, M.D.
New York, N.Y.

■

Exercise and the Heart

Editor, MEDICAL TRIBUNE:

I would submit that your recent editorial "Exercise for the Heart—an Act of Faith?" is itself an appeal to emotions and faith rather than an understanding of research data available to any interested reviewer. The writer has conveniently swept all of the questions regarding exercise therapy into one pile and declared the whole pile unproved. Had he been careful enough to research his comments, he would have clearly seen that many of the questions are now resolved.

Certainly no responsible leader in this field ever suggested that exercise by itself reduces atherosclerosis; nor have they claimed that it prevents coronary heart disease, extends life, or prevents recurrence once the disease is manifested. Parenthetically, there is epidemiological and statistical evidence suggesting such results. These are long-term, hoped-for goals.

On the proved side, however, many short-term effects of exercise therapy are now quite well known. Oxygen requirements of myocardial work fall with the drop in resting and exercise heart rate and blood pressure—a very clear-cut benefit to the coronary patient, particularly the one with angina. Work capacity increases, as does cardiac stroke volume and maximum oxygen uptake. Glucose improves, triglyceride levels may drop, and the efficiency of the peripheral blood distribution and return increases. There are other known effects as well, but the improved patient self-confidence and sense of well-being frequently are the best results from the patient's standpoint. Though the writer makes light of these psychologic benefits, they are so real and dramatic in so many patients that they stand by themselves as a prime reason for exercise therapy.

In the years past, we used insulin with great patient benefit for its short-term effects alone. We hoped it would prolong life and reduce atherosclerosis. It now appears to do neither, yet we used insulin for the results it did provide. I suppose there were physicians at that time, too, who condemned its use, preferring to beat their breasts about the unknown rather than apply the known for their patient's benefit.

FRANK W. JACKSON, M.D.
Harrisburg, Pa.

One Man... and Medicine

ARTHUR M. SACKLER, M.D.,
International Publisher, Medical Tribune

Space-Time Links

RETURNING FROM THE INAUGURATION of a new medical school, my jet passed over the fabled isle of Cos. A con-trail was linking in space the island birthplace of Hippocrates with the Paris of Pinel. Hippocrates of Cos and his colleagues of the fifth century B.C. were "migratory" physicians. As he traveled, Hippocrates not only rendered patient care but was constantly teaching. I couldn't help but recall Arthur Master's recent comments on the "full-time professor," whose travels and guest lecturing have left such a gap in medical education that "interns and residents in the hospitals... are being neglected" (MEDICAL TRIBUNE, September 13).

In Paris, in 1792, the Ecole de Médecine of the university was reopened following a series of disturbances and, with its reopening, dropped one of Hippocrates' great admirers, the now historic medical "great," Philippe Pinel. Pinel, the son of a poor country G.P., was a quiet and reserved ex-divinity student who didn't begin the study of medicine until after he was 30 and after a stint in the natural sciences. For him medicine had to fulfill the same criteria as zoology and mineralogy. Infected by the contagious influence of Linnaeus, he used acute clinical observation and an analytic approach to symptomatology to create a new nosology.

Transforming Penitentiaries

I had referred to Pinel as father of the social psychiatry of today in Yugoslavia, 1970, in my address as chairman-elect at the third World Congress of Social Psychiatry. Pinel had been deeply moved by a pamphlet in which Mirabeau, in 1788, had described the condition of the mentally sick at Bicêtre. "The new inmates are heedlessly flung into this wild rabble of lunatics, and any ragamuffin who comes along with a few sous in his pocket can be gratified by the sight of the menagerie." Four years later, Pinel was appointed superintendent of the Bicêtre. He went in person to convince the French deputies that the "insane" were entitled to the rights of man, that they should be treated as the ordinary sick. The French Revolution brought freedom of a kind even for the insane. As Sigerist put it, "What had been penitentiaries were transformed into hospitals."

How Many Hundreds of Years...

How many hundreds of years will pass before we take the next necessary steps in our approach to mental disease? At the fourth World Congress of Social Psychiatry this year in Jerusalem, I had been sensitized to the fact that we still, even as physicians, stigmatize "patients." I had personally reacted with shock when Vladimir Hudolin of Yugoslavia suggested that patients be represented on the governing bodies of our Association. I was ashamed at my own backwardness when he pointed out that ex-alcoholics and recovered schizophrenics could make unique as well as significant contributions. I then backed Hudolin's proposal, but I failed to go forward.

I should have introduced a series of resolutions articulating the "rights of man" in respect to mental and emotional disorders. There were three points that could and should be established:

The "Rights of Man"

1. Every individual has the right, at his election, to prophylactic and therapeutic mental-health care.
2. Individuals receiving such care have the right to be represented in their treatment by family or physicians or other surrogate.
3. No individual should lose any of his civil rights by virtue of his being a recipient of such treatment.

Hospitals Made Penitentiaries

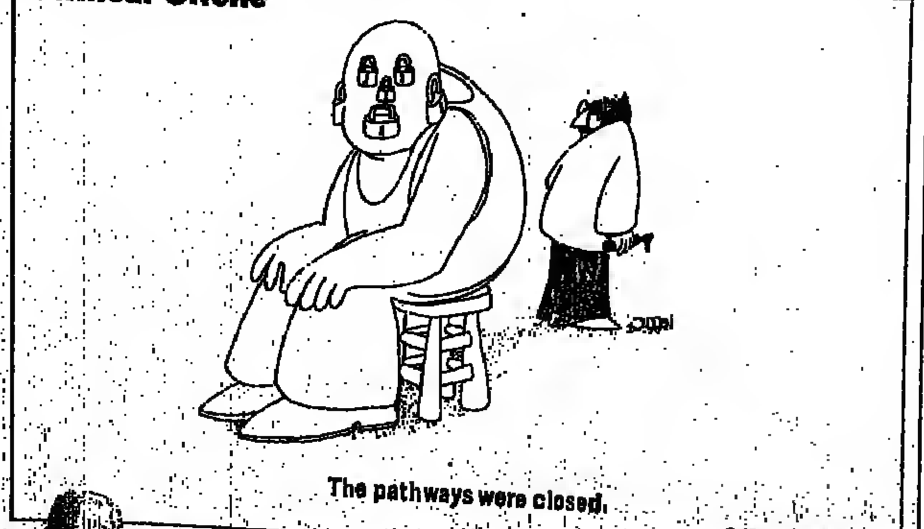
When I think of my failure to bring these motions to the floor, I note the contrast between the historic boldness of the reserved and timid Pinel and the timidity in action of so many of us who have followed him.

Consider, also, an incredible time linkage in respect to mental disease. Today, 180 years after Pinel struck the shackles from the limbs of the mentally sick, the members of the U.N. are considering an international convention on psychoactive substances which will place the stigma of criminality on psychoactive agents and will shackle psychopharmaceuticals with police strictures. The U.S. Senate has deferred action on this international convention—and rightly so, because it is retrogressive legislation. But the swing of the wheel of history relates to more than drugs alone as we sadly note that, whereas the French Revolution transformed penitentiaries into hospitals, we are now witnessing the conversion of some mental hospitals into penitentiaries.

EPIGRAMS—Clinical and Otherwise

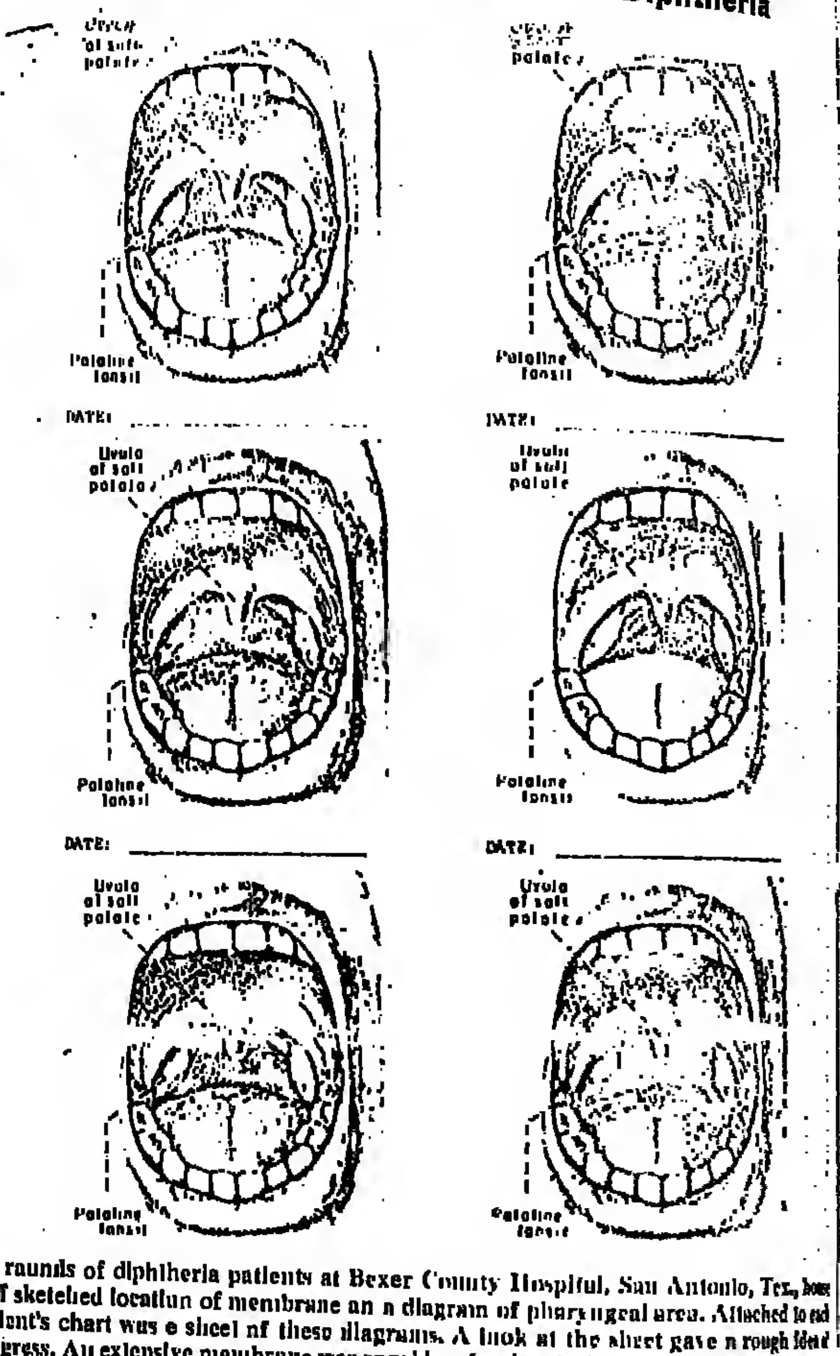
Don't despise empiric truth. Lots of things work in practice for which the laboratory has never found proof.
Martin H. Fischer (1879-1962)

Clinical Cliche



The pathways were closed.

Patient's Progress Charted in Diphtheria



On rounds of diphtheria patients at Bexer County Hospital, San Antonio, Tex., house staff sketched location of membrane on a diagram of pharyngeal area. Attached to each patient's chart was a sheet of these diagrams. A look at the sheet gave a rough idea of progress. An extensive membrane was considered a signal of possible airway obstruction.

Epidemic of Diphtheria: Surprises and Dilemmas

Continued from page 1

there—was different from the classic "bullneck" seen in diphtheria.

At first, though, Bexar County Hospital physicians had to proceed from at best limited (in the case of Dr. McCloskey) or no more than textbook (in the case of Dr. Eller) knowledge of the disease. The pediatric "front lines," as Dr. Eller puts it, were led by a physician without any experience with diphtheria who became chief pediatrics resident as the epidemic was coming to a head, Dr. Susan E. M. Richards. "We had to learn things as we went along," Dr. Eller recounts. "We started off by following guidelines that had been set down in years past and ended up modifying them."

Dr. McCloskey relates: "The first thing we did was to make sure that we had adequate supplies of antibiotics and antitoxin on hand to treat these people. Because this is an uncommon disease, the antitoxin that's used is generally not available in great quantities. We cleaned out the local supplies very quickly, and our pharmacist had to order the horse serum from the National Drug Company itself."

How much antitoxin to administer to eradicate the toxemia was difficult to settle. "We ended up," says Dr. Eller, "using larger doses on the average than those that have for a long time been recommended. The recommended doses for the moderate-to-severe forms of the disease range from 20,000 to 80,000 units, but in the majority of cases we felt reluctant to give doses of 20,000 units. We averaged around 80,000." But as much as 120,000 units was stipulated for extremely severe cases, such as those evincing "bullneck." The antitoxin was infused intravenously in 100 to 200 ml. of isotonic saline for 30 minutes.

Dr. Eller was also troubled by the fact that the exact exotoxic component responsible for the exotoxin's morbid effects has never been identified. "I wasn't sure whether the component we wanted to protect the patient was even present in the commercially available material. It no doubt did contain the protective factor, but in modern-day medicine I would like to see a more purified antitoxin."

Antitoxin Sensitivity Tested

Before the antitoxin was administered, sensitivity testing was carried out intradermally with 0.1 ml. of a 1:100 dilution of the antitoxin in isotonic saline. Patients with positive test results were desensitized by serial dilutions of diluted antitoxin.

Antimicrobial therapy was given for seven days to all patients. Those who had difficulty swallowing at first received either intramuscular injections of procaine penicillin G every 12 hours (300,000 units to patients under five years and 600,000 units to those over five) or erythromycin lactobionate intravenously every 8 hours (12 mg./Kg. for children and 0.5 Gm. for adults) or erythromycin ethyl succinate intramuscularly every eight hours (only to children two to five years, 12 mg./Kg.).

After a while, the intravenously administered erythromycin was discontinued because a high incidence of thrombophlebitis was associated with it in all age groups and a high proportion of nausea and vomiting in the younger age groups.

When able to swallow, patients received either penicillin G orally every six hours (125 mg. for those younger than five and 250 mg. for those older than five) or erythromycin stearate orally every six hours (125 mg. for children under five and 250 mg. for those older than five).

"We decided as a group," says Dr. McCloskey, "to keep patients hospitalized and on strict bed rest for at least 14 days

Continued on following page

Continued from preceding page

because that would be beyond the danger point of myocarditis for most of them." Dr. Stanley E. Crawford, chairman of pediatrics, was prominent in the clinical decision-making group.

Electrocardiograms were taken every other day. House staff were required to sketch the patient's membrane as they went along on mimeographed illustrations of the pharyngeal area. "The location of the membrane is grossly a reflection of how well the patient is doing," Dr. McCloskey points out. "If it is extensive, it's undoubtedly in the respiratory tract and you had better be prepared to deal with obstructive disease."

Airway Obstructed in Four

Airway obstruction occurred in four patients, pneumonia in two, palatal paralysis in two, peritonsillar abscess in one, and myocarditis in 16. Three patients died, all children, in the period June, 1969–December, 1970. "They were definitely more ill from the very beginning than the rest of the children," Dr. McCloskey relates. Two died from obstructive membrane formation with pneumonia, and one of myocarditis. The three had all been in the pediatrics intensive care unit. (The family of one child who died refused to be immunized, MEDICAL TRIBUNE was told by several sources.)

"We were fortunate," says Dr. McCloskey, "that we didn't see a lot of complications and deaths. Death rates as high as 7 to 10 per cent have been reported. That would have meant that we would have had 14 to 20 people die. I like to think that the low complication and fatality rates of this epidemic were because the patients were hospitalized promptly and treated promptly and correctly—but it may have been a characteristic of this particular epidemic."

Only 13.9 per cent of the San Antonio cases in 1970 were classified as severe. But 65.7 per cent did have the moderate form of the disease. Interestingly, 71.4 per cent of 49 patients who were fully immunized had the moderate form. However, only 6.1 per cent of the fully immunized had the severe form. Of all the 201 San Antonio diphtheria inpatients in 1970, 24.4 per cent had been fully immunized.

No Extremity Paralysis

There was not even one case of paralysis of the extremities. Cranial nerve palsies, though, yes. In fact, Dr. McCloskey relates: "Something very interesting occurred that we were not able to explain scientifically. It was an impression of emergency-room physicians that they saw an unusually high number of patients with isolated cranial nerve palsies who came in complaining of this and that. Maybe these people had gone unrecognized and untreated."

How does the toxin of Corynebacterium diphtheriae exert its effects?

"By interfering with nucleic acid metabolism," Dr. McCloskey explained. "Basically, it interferes with one of the enzymes that is very important in converting the DNA code into protein, amino acyl transferase II. When the toxin gets into a cell, the cell just dies. The heart may balloon up, the liver may become fatty, et cetera. It can have an effect on all organs or systems, although the most important clinically are the heart and nervous system."

Treating myocarditis resulting from diphtheria is a big problem. "The conventional way to treat heart-failure, with a digitalis preparation, doesn't work too well because the myocardium is intoxicated," Dr. McCloskey points out. "So you have to try to help the heart do its job in every way you can: prevent accumulation of fluid, give oxygen, in severe instances give corticosteroids. If the patient develops signs of congestive heart-failure, reduce sodium intake, reduce fluid intake. One patient who died had entirely uncontrollable arrhythmia. We put in a pacemaker. We tried. But if your myocardium is totally sick, you can put in any number of pacemakers—it doesn't make any difference."

Among the several cardiologists who supervised the care of the myocarditis patients were Drs. J. R. Norton, Jr., and Robert C. Talley.

"The thoracic surgeons also participated in the treatment of diphtheria patients because several of the children had so much membrane down their tracheobronchial tree that they had to be bronchoscoped for the secretions to be removed. They couldn't breathe, became cyanotic." Dr. Leo Ciello Mainardi, no longer at the medical school, led this effort. Several tracheostomies were necessary.

"Sometimes we removed the membrane ourselves—with swabs. Once I removed one that was hanging off a tonsil—with a Kelly hemostat. I was afraid of aspiration." Dr. McCloskey points out that the membrane was not removed routinely.

He wants to know: "Why do people call it a pseudomembrane? It's a membrane. It's a thin film composed of layers of dead and dying cells from the mucosa—proteinaceous material and bacteria. As far as I'm concerned, that's a membrane."

Occasionally, the membrane gets to be "quite thick, like shoe leather."

Diphtheria can also manifest itself as a skin wound. Wounds of the ankle, foot, and finger were diagnosed in four San Antonio diphtheria inpatients until now. Dr. McCloskey agrees with Dr. Mark A. Belsey of New Orleans that, although predominantly spread by respiratory secretions and droplets, diphtheria can be acquired from the skin. "While only four patients had diseased skin, we don't know how many people were skin carriers. There are people who carry the organism on the surface of the skin without a wound."

However, isolation was basically of the respiratory type. Detailed in the infections control manual prepared by the hospital's nurse-epidemiologist, Charlene S. Hardy, R.N., it essentially consisted of handwashing on entry (and departure) and donning a gown and mask.

Medical isolation unit nurse Christine Jones, R.N., had never seen a case of diphtheria in her many years of nursing. In the epidemic, she had also to contend with polio, TB, salmonellosis, pneumonia, typhoid, and leprosy.

"We didn't know where to put all the patients," says Dr. McCloskey. Many overspilled the six-room unit, which at the epidemic's height became at least a 12-bed one.

Disinfectant Believed Effective

Mary Prokopchack, R.N., head nurse on the unit, believes the disinfectant they use for handwashing, a long-chain iodine-containing alcohol, is "very effective." Terminal disinfection, so important in diphtheria, was accomplished with a phenolic compound.

Pediatrics set up its special diphtheria ward in an entire wing of the pediatrics floor, a wing chosen because it is the only one without an immediately accessible fire exit. (There is one in the adjacent intensive care unit.) "We moved the whole nurses' station in the wing," head nurse Ora Prattes told MEDICAL TRIBUNE. Sometimes six children with diphtheria were placed in one room. Not placing a newly admitted child with a convalescing one required a lot of maneuvering. And keeping the children entertained—and in bed—during convalescence proved tremendously difficult. "Once we left the room for a minute, and when we came back one of the boys with myocarditis was up on the window ledge writing on the window with a wet bar of soap. All the kids in the room were having a blast."

Laboratory diagnosis of the disease, the prevention of serum sickness, and clinical glomerulonephritis research—of a kind initiated only because of the existence of the epidemic—will be discussed in the next installment.

Streptococcus Program Has Double Goal

The dual objectives of a new streptococcus detection program in Sterling, Colo., are to reduce the incidence of strep infections and to test the program's sampling methods. At left, volunteers take cultures at the Campbell School, one of 17 grade schools participating, and at right, microbiologist Pat W. Freeburg (foreground), lab director for the Northeast Colorado Health Department, organizes samples from the school. The program is supported by the Colorado-Wyoming Regional Medical Program and the Colorado Heart Association. Codirector is Dr. Ham Jackson.

Caveats Issued on Resuscitation in Trauma

Medical Tribune Report

PHILADELPHIA—Every physician knows that care of the critically injured patient starts with resuscitation, but this rule is broken "disturbingly often," a leading surgeon declared here.

What is more, said Dr. Dominic A. DeLaurentis, even when the rule is remembered, precious time is wasted during emergencies on inappropriate procedures like tracheostomy, when a simple endotracheal tube would do the job "quicker, safer, and better."

He issued his caveats at an international symposium on Critical Care Medicine sponsored by Hahnemann Medical College and Hospital.

Speaking on the management of abdominal trauma, Dr. DeLaurentis declared: "Absolutely no definitive organ treatment should begin until it has been established that the patient is resuscitated and is going to live. Successful resuscitation requires simultaneous, rapid, and methodical evaluation of three questions: Is the cardiovascular system intact? Is the patient breathing? Does the patient require immediate surgery to bring about cardiovascular or pulmonary function?"

"It is disturbing," he added, "to discover how often this [set of guidelines] is broken."

In a series of do's and don't's for emergency care, Dr. DeLaurentis, who is associate Professor of Surgery, made these points:

- If there's significant external bleeding, forget about tourniquets, hemostats, or sutures initially. "The best and oldest hemostatic device known to man is direct pressure applied by fingers, hands, or pressure packs.
- To treat cardiac arrest "always use" closed cardiac massage. "It can be done in seconds, is a sterile procedure, it usually produces no pneumothorax . . . and provides adequate intraventricular pressure." The exceptions to this rule are recurrent cardiac tamponade or penetrating heart wounds that have opened the chest.
- In shock, avoid putting the patient in the Trendelenburg position, since this decreases pulmonary function and thus enhances anoxia.
- Don't give digitalis or antiarrhythmic drugs unless a competent cardiologist orders them. Use oxygen and administer sodium bicarbonate, 40 mEq. intravenously every three to five minutes during cardiac massage.
- Remember that adequate ventilation must be instituted simultaneously with cardiac massage. "These two maneuvers constitute resuscitation. Either procedure alone will fail to keep the patient alive."
- "Forget tracheostomy. This procedure should not be an emergency procedure and should rarely be done for resuscitation because it usually takes too long to perform. Also, a hasty tracheostomy can lead to serious complications."
- If there's massive hemorrhage, don't try to get the patient out of shock by prolonged fluid and blood administration. Move him to the operating room and start immediate surgery.

Commenting on surgical experience with abdominal trauma in civilian life, Dr. DeLaurentis noted that the prognosis is far graver with blunt trauma, which carries a mortality of 20 to 60 per cent, than with penetrating abdominal wounds. In the latter the prognosis is "usually good, and mortality rates vary between 2 and 10 per cent, depending on the predominance of stab or gunshot wounds."

Among the reasons for these differences in outcome, the surgeon suggested, were the fact that blunt trauma usually occurs in older people and that injuries are often multiple and may affect extra-abdominal organ systems. Further, he noted, penetrating wounds can be diagnosed quite early and treatment quickly started, while surgery usually begins late in blunt trauma because of the difficulty of making a diagnosis and the effect on multiple organ systems.

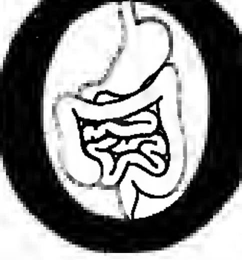
If the patient is a victim of blunt abdominal trauma, Dr. DeLaurentis stressed: "Repeated careful abdominal examination is mandatory, and this must be constantly related to the patient's vital signs. Shock is a very important clue. If other causes of shock can be ruled out, this is the best indication for surgery. If shock is not present, we can afford to postpone surgery and, if necessary, do more detailed diagnostic studies."

A.M.A. Committee Issues Guidelines On Cosmetic-Induced Skin Disorders

Medical Tribune Report

CHICAGO—The American Medical Association Committee on Cutaneous Health and Cosmetics has issued a set of guidelines for physicians to assist in diagnosis and treatment when a cosmetic-induced skin problem is suspected. The guidelines are:

- Stop use of all cosmetics.
- Shampoo the hair with a bland soap to remove all hair preparations.
- Stop use of all creams, including cleansing, foundation, tissue, and cold creams.
- Wash the face with an unscented soap.
- Remove nail lacquer.
- Bring in all cosmetics used, both old and new, for examination and testing.
- Obtain names and samples of cosmetics used in any beauty parlor visit.
- If lips were not affected, use of lipstick may be continued.

G.I. F  RUM

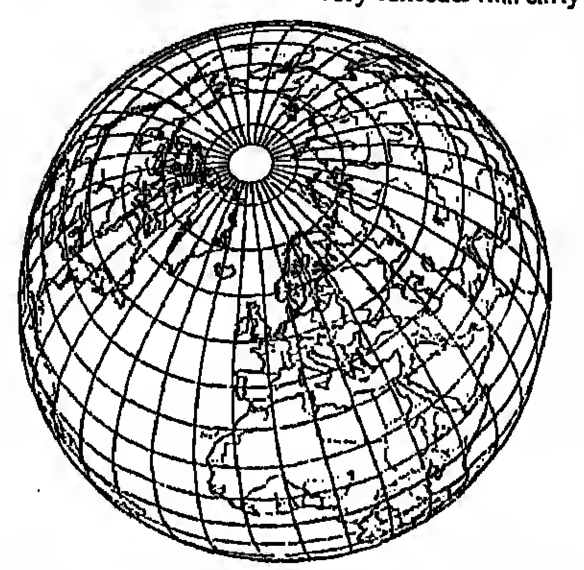
A CURRENT REVIEW OF INVESTIGATIONS IN GASTROENTEROLOGY

O is for ulcer: "myth" or fact?

As recently as 1967, one highly respected investigator[1] branded as a "myth" the belief that persons with blood group O are more susceptible to duodenal ulcer than those with other blood groups. In an earlier paper,[2] he expressed the opinion that studies undertaken decades before conclusively discredited any link between blood groups and disease; he also cites statistical and technical pitfalls inherent in any investigation of the link. But other researchers do not share his opinion.

Documented in many countries

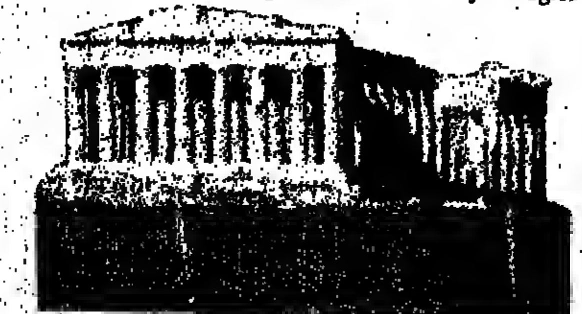
An exponent[3] of the group believing that there is truth in the "O for ulcer" theory concedes that early



studies were flawed either by inefficient analysis or insufficient numbers of patients. He states, however, that starting in 1953 in England, very careful investigations were initiated to try to correlate certain conditions with specific blood types. One such study revealed a marked association between peptic ulcer and blood group O. Similar projects were soon undertaken in other parts of the world. Thus, today we can read in the 1971 edition of an authoritative medical textbook[4] that, while the reasons are unknown, the apparent greater susceptibility of persons with O-type blood to peptic ulceration has been noted in many countries throughout the world.

Greece—mythology and pathology

Curiously, Greece—the country that gave the world one of the most pervasive of all mythologies—



is also one of the countries that recently contributed impressive evidence to help bring the "myth" of group O susceptibility to duodenal ulcer closer to fact. A recent study[5] consisted of a review of the records of 49,375 patients treated between 1950 and 1960 by the various departments of Evangelismos Hospital, Athens. Of these, 3858 were found to have had peptic ulcer disease. Only the ulcer patients whose blood groups had been determined were included in the study: 2197 patients—1790 men and 407 women ranging from 17 to 81 years of age. The ratio of gastric to duodenal ulcer was about 1:5. One of the author's conclusions was that Greeks with group O blood stand a 20% higher chance of developing ulcer disease than those with group A blood.

Another factor: excessive anxiety

Renewed interest in the correlation of blood types and ulcer diseases dates only from the early 1950's. The role of anxiety in duodenal ulcer, however, has long been noted. For example, it has been observed[6] that the situations that may precipitate an ulcer are not as important as the individual's reaction to these situations.

References: 1. Wiener, A. S.: *Med. Opinion Rev.*, 3:(10)148, 1967. 2. Wiener, A. S.: *Lancet*, 1:813, 1962. 3. Clarke, C. A.: "Blood Groups and Disease," in Steinberg, A. G. (ed.): *Progress in Medical Genetics*, New York, Grune & Stratton, 1961, vol. 1, pp. 81-87. 4. Kirsner, J. B.: "Acid-Peptic Disease," in Beeson, P. B., and McDermott, W. (eds.): *Cecil-Loeb Textbook of Medicine*, ed. 13, Philadelphia, W. B. Saunders Company, 1971, vol. 2, p. 1266. 5. Mrikos, G.; Christakopoulos, P., and Petropoulos, E.: *Amer. J. Dig. Dis.*, 11:790, 1966. 6. Palmer, E. D.: *Clinical Gastroenterology*, New York, Paul B. Hoeber, Inc., 1957, pp. 190-191.

The following reports are from papers presented at the meeting of the American Academy of Pediatrics, held in New York.

Urologic Surgery

The need for massive psychologic support and guidance for children who undergo reconstructive urologic surgery to provide the genitalia they lacked at birth, and for their parents, was stressed by a four-man team from Columbia University's College of Physicians and Surgeons and Babies Hospital.

"It is not enough to build a new person surgically (especially if the genitalia are involved); you must support, counsel, and reassure the inner man as well," they said. The team—consisting of Todd Feinberg and Katherine Jeter and Drs. William Langford and John K. Lattimer—called particular attention to private worries about sexual performance and urine exit at a new location that patients should be helped to reveal.

Status Asthmaticus

In children with status asthmaticus and severe hypercapnia, intravenous infusion of isoproterenol reduces the incidence of respiratory failure requiring mechanical ventilation, shortens the duration of severe hypercapnia, produces few, if potentially serious, complications, and deserves extensive clinical trial, according to Dr. John J. Downes, of Children's Hospital, Philadelphia.

His collaborators were Drs. David W. Wood, Ivan Harwood, and Harold N. Sheiokopf.

Pulmonary Function Test

A 10-minute test of pulmonary function, using methacholine in aerosol to induce bronchospasm in susceptible subjects, has differentiated "habit" cough from other causes of paroxysms of coughing in children, Dr. Patricia A. Nell of Green Bay, Wis., reported.

Seventeen children, ranging in age from six to 14 years and with undifferentiated cough, who were symptom-free for 24 hours and off all medication for 12, were given deep inhalations of the aerosol for two minutes, and five of them developed significant bronchospasm, she said.

Warm-Blanket Surgery

The use of an electric warming blanket covered by two layers of cotton blanket under children undergoing anesthesia with halothane, nitrous oxide, and oxygen is an effective method of conserving heat when the patient's surface area is less than 0.5 sq. M., according to Drs. Nishao G. Goudsouzian, R. H. Morris, and J. F. Ryan, of the Anesthesia Laboratories of Harvard Medical School at Massachusetts General Hospital.

"For practical purposes," they said, "a child with a surface area of 0.5 sq. M. weighs 10 kilos and is 12-14 months of age."

Seven infants of this size were anesthetized and underwent surgery on the warming blanket, while six control infants were not placed on the blanket.

The investigators report that the fall in body temperature was significantly less for the warmed patients after 60, 75, 105, and 120 minutes of anesthesia.

They also compared groups of children with a surface area of more than 0.5 sq. M. Six children in this category underwent anesthesia and surgery on the warming blanket, while six controls did not have the blanket, but no significant differences in temperature fall in these larger children was found at 60, 75, 90, 105, or 120 minutes of anesthesia.

They concluded that, since there were potential hazards in the use of the blanket, they could not recommend its routine use for larger children.

Isolation of Enzyme May Aid In Therapy for Parkinsonism

Medical Tribune Report

ROCKVILLE, MD.—Isolation by Yale University scientists of an enzyme essential to the brain's control of bodily movement appears to have significant implications for the treatment of Parkinson's disease, the National Institute of Mental Health commented.

Paul Greengard, Ph.D., Gary Petzold, Ph.D., and John Kebabian, Ph.D., conducted the research under grants from NIMH and the National Institute of Neurological Diseases and Stroke.

In recent years, NIMH observed, medical scientists have produced evidence that the caudate nucleus plays a major role in directing movement of the body. In turn, dopamine is believed to regulate the activity of the caudate nucleus by interacting with a previously unknown chemical substance, the "dopamine receptor." Abnormalities of the dopamine system in the caudate nucleus are believed to be a major factor in Parkinson's disease.

Dr. Greengard's team has isolated from the caudate nucleus of experimental animals an enzyme that appears to be the dopamine receptor, NIMH said. Its name, "dopamine-sensitive adenylate cyclase," describes the chemical change it produces. Activity of this enzyme is stimulated by extremely low concentrations of dopamine.

Apart from increasing basic understanding of how the brain works, clinical implications of the Yale team's findings are far-reaching, NIMH said. The search for new drugs useful in the treatment of Parkinson's disease has been hampered by lack of a suitable test system. Isolation of the dopamine receptor makes it possible to carry out rapid testing of large numbers of compounds for dopamine-like activity and should accelerate the discovery of new compounds for treatment of the disease.

A secondary yield of the research, NIMH continued may lie in the treatment of mental illness. Such tranquilizers as the phenothiazines and butyrophenones possess as a major side effect the property of causing symptoms similar to those seen in Parkinson's disease, limiting the freedom of physicians to use these drugs.

Sun Ssu-miao

Sun Ssu-miao (640-720) was an alchemist and physician during the T'ang Dynasty of China (618-907). He was a famous physician who prepared his own medications for patients and was a prolific author. He wrote the book of the *Thousand Precious Prescriptions* and is believed to have written the *Yin-hai ching wei*, or *The Delicacies of the Eye*.

This stamp was issued 10 years ago by the People's Republic of China in a series honoring scientists of ancient China.

Text: Dr. Joseph Kler
Stamp: Minkus Publications, Inc., New York

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Hydrochlorothiazide: Anuria; discontinue drug if renal shutdown occurs for any reason. Progressive hepatic disease may accelerate development of hepatic coma. Do not give to patients with known allergy to thiazides or other sulfonamide-derived drugs.
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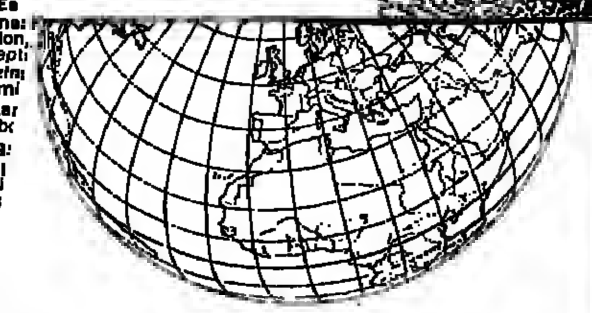

studies were flawed either by inefficient analysis or insufficient numbers of patients. He states, however, that starting in 1953 in England, very careful investigations were initiated to try to correlate certain conditions with specific blood types. One such study revealed a marked association between peptic ulcer and blood group O. Similar projects were soon undertaken in other parts of the world. Thus, today we can read in the 1971 edition of an authoritative medical textbook[4] that, while the reasons are unknown, the apparent greater susceptibility of persons with O-type blood to peptic ulceration has been noted in many countries throughout the world.

Greece—mythology and pathology

Curiously, Greece—the country that gave the

information tends to implicate enteric-coated potassium salts. Therefore, coated potassium-containing formulations should be used only when dietary supplementation is not practical and discontinued immediately if abdominal pain, distention, nausea, vomiting, or GI bleeding occurs.
Lowering of blood pressure in hypertensive patients may sometimes result in nitrogen retention, and also result in reduced renal blood flow, particularly in those with impaired renal function. If progressive renal insufficiency is observed, discontinuance of drug may be desirable. In patients with renal disease, thiazides may precipitate azotemia. Cumulative effects may develop in those with impaired renal function. Dosage should always be carefully titrated.
Pay special attention to electrolyte balance of patients with severe hepatic insufficiency. In patients with cirrhosis and ascites, watch for symptoms of impending hepatic coma (confusion, drowsiness, tremor) and test for increased arterial ammonia concentration, sodium and potassium excretion. Thiazides may decrease glucose tolerance; use cautiously in diabetics.
Hyperuricemia may occur but is generally reversed by a uricosuric agent.
Thiazides may decrease arterial responsiveness to norepinephrine and increase responsiveness to tubocurarine; if possible, withdraw therapy 2 weeks prior to surgery. Hypotensive episodes under anesthesia have been observed. If emergency surgery is indicated, preanesthetic and anesthetic agents should be administered in reduced dosage.
The possibility of sensitivity reactions should be considered in patients with a history of allergy or bronchial asthma.
Ser-Ap-Es
Reserpine: Withdraw reserpine 2 weeks before surgery, if possible. For emergency surgical procedures, give vagal blocking agents parenterally to prevent or reverse hypotension and/or bradycardia.
Electroshock therapy should not be given to patients receiving rauwolfia preparations, since severe and even fatal reactions have been reported. Discontinue for 2 weeks before giving electroshock therapy.
Hydralazine: Hydralazine, particularly if given for prolonged periods, may produce an arthritis-like syndrome, leading in rare instances to a clinical picture simulating acute systemic lupus erythematosus. Most of these reactions are reversible upon withdrawal of therapy. These side effects are not anticipated even with maximal recommended dosage of Ser-Ap-Es.
Hydrochlorothiazide: See hydrochlorothiazide section above.
Usage in Pregnancy
Esimil
Guanethidine: The safety of guanethidine for use in pregnancy has not been established; therefore, this drug should be used in pregnant patients only when, in the judgment of the physician, its use is deemed essential to the welfare of the patient.
Hydrochlorothiazide: Thiazides should be used with caution in pregnant or lactating patients since this drug crosses the placental barrier and appears in breast milk and may result in fetal hyperbilirubinemia, thrombocytopenia, or altered carbohydrate metabolism. It is therefore possible that the adverse reactions seen in the adult may occur in the newborn.
Ser-Ap-Es
Reserpine: The safety of rauwolfia preparations for use in pregnancy or lactation has not been established; therefore, this drug should be used in pregnant patients only when, in the judgment of the physician, its use is deemed essential to the welfare of the patient.
Hydralazine: Although there has been no adverse experience with hydralazine in pregnancy, there have been no systematic animal reproduction studies to support the idea of safety in pregnancy. The drug should be used in pregnancy only when, in the judgment of the physician, it is deemed essential to the welfare of the patient.
Hydrochlorothiazide: See hydrochlorothiazide section above.
PRECAUTIONS
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Guanethidine: Give cautiously to patients with severe coronary insufficiency, recent myocardial infarction, or cerebrovascular insufficiency. Give Esimil with extreme caution to those with severe cardiac failure.
Appetite suppressants (eg, amphetamines), mild stimulants (eg, ephedrine, methylphenidate), and tricyclic antidepressants (eg, imipramine, protriptyline, doxepin) may decrease the hypotensive effect of guanethidine. Wait one week after discontinuing MAO inhibitors before starting guanethidine.

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Peptic ulcers or other chronic disorders may be aggravated by a relative increase in parasympathetic tone. Periodic blood counts and liver function tests are advised during prolonged therapy.
Hydrochlorothiazide: Perform serum potassium, BUN, uric acid, and blood sugar tests prior to and at appropriate intervals during therapy. Watch patients for clinical signs of fluid or electrolyte imbalance (hyponatremia, hypochloremic alkalosis, hypokalemia). Warning signs: dryness of mouth, thirst, weakness, lethargy, drowsiness, restlessness, muscle pains or cramps, muscular fatigue, hypotension, oliguria, tachycardia, GI disturbance. Serum and urine electrolyte determinations are particularly important when patient is vomiting excessively; receiving parenteral fluids, steroids, or ACTH; during brisk diuresis; in presence of severe cirrhosis.
Interference with adequate oral intake of electrolytes will also contribute to hypokalemia. Digitalis may exaggerate metabolic effects of hypokalemia especially with reference to myocardial activity. (Signs of digitalis intoxication may be produced by formerly tolerated doses of digitalis.) Hypokalemia may be avoided or treated with supplemental potassium or potassium-rich foods. Supplemental potassium is indicated when serum potassium is 4 mEq/liter or less, or if patient is receiving digitalis. Chloride deficit may be corrected with ammonium chloride (except in those with hepatic or renal disease) and largely prevented by a nonrigid salt intake. If dietary salt is unduly restricted, especially during hot weather, in severely edematous patients with congestive heart failure or renal disease, a low salt syndrome may complicate therapy with thiazides.
Transient elevations in plasma calcium may occur in patients taking thiazides, particularly in those with hyperparathyroidism. Pathological changes in the parathyroid gland have been reported in a few patients on prolonged thiazide therapy.
Hyperuricemia (or frank gout) may be precipitated in certain patients. Insulin requirements in diabetic patients may be increased, decreased, or unchanged. Latent diabetes may become manifest during thiazide therapy.
If nitrogen retention indicates onset of renal impairment, discontinue drug.
Ser-Ap-Es
Reserpine: Use cautiously in patients with history of peptic ulcer, ulcerative colitis, or other GI disorders. May precipitate biliary colic in patients with gallstones.
Discontinue at first sign of mental depression, keeping in mind possibility of suicide. Use with extreme caution in those with history of mental depression. Take special care with asthmatics and in hypertensives with renal insufficiency. Use cautiously with digitalis, quinidine, and guanethidine. Not recommended for aortic insufficiency.
Hydralazine: Use cautiously in suspected coronary artery disease, cerebral vascular accidents, and advanced renal damage.
Peripheral neuritis, evidenced by paresthesias, numbness, and tingling, has been observed. Published evidence suggests an antipyridoxine effect and addition of pyridoxine to the regimen if symptoms develop.
Blood dyscrasias, consisting of reduction in hemoglobin and red cell count, leukopenia, agranulocytosis, and purpura, have been reported rarely. If such abnormalities develop, discontinue therapy.
Periodic blood counts and liver function tests are advised during prolonged therapy.
Hydrochlorothiazide: See hydrochlorothiazide section above.
ADVERSE REACTIONS
Esimil
Guanethidine: *Frequent reactions due to sympathetic blockade*—dizziness, weakness, lassitude, syncope. *Frequent reactions caused by unopposed parasympathetic activity*—bradycardia, increase in bowel movements, diarrhea (which may be severe and require discontinuation of the drug). *Other common reactions*—inhibition of ejaculation, fluid retention, edema, congestive heart failure. *Less frequently*—dyspnea, fatigue, nausea, vomiting, nocturia, urinary incontinence, dermatitis, scalp hair loss, dry mouth, rise in BUN, ptosis of the lids, blurring of vision, parotid tenderness, myalgia, muscle tremor, mental depression, chest pains (angina), chest paresthesias, nasal congestion, weight gain, and asthma in susceptible individuals.
Hydrochlorothiazide: *Gastrointestinal*—anorexia, gastric irritation, nausea, vomiting, cramping, diarrhea, constipation, jaundice (intrahepatic cholestatic), pancreatitis, hyperglycemia, glycosuria. *Central nervous system*—dizziness, vertigo, paresthesias, headache, xanthopsia. *Dermatologic-Hypersensitivity*—purpura, photosensitivity, rash, urticaria, necrotizing angiitis. *Hematologic*—leukopenia, thrombocytopenia, agranulocytosis, aplastic anemia. *Cardiovascular*—orthostatic hypotension may occur and may be potentiated by alcohol, barbiturates, or narcotics. *Miscellaneous*—muscle spasm, weakness, restlessness. Whenever adverse reactions are moderate or severe, reduce dosage or withdraw therapy.
Ser-Ap-Es
Reserpine: Increased salivation, increased gastric secretions, nausea, vomiting, anorexia, aggravation of peptic ulcer or ulcerative colitis, increased intestinal motility, diarrhea, angina-like syndrome, ectopic cardiac rhythms particularly when used concurrently with digitalis, bradycardia, flushing, and mental depression, drowsiness, lassitude, nervousness, paradoxical anxiety, nightmares (which may be an early sign of mental depression), rarely atypical Parkinsonian syndrome, central nervous system sensitization (manifested by dull sensorium, deafness, glaucoma, uveitis, and optic atrophy), pruritus, skin rash, dryness of mouth, dizziness, headache, syncope, epistaxis, purpura due to thrombocytopenia, asthma in susceptible persons, nasal congestion, weight gain, impotence or decreased libido, enhanced susceptibility to colds, dysuria, conjunctival injection, dyspnea, muscular aches.
Hydralazine: *Common:* Headache, palpitations, anorexia, nausea, vomiting, diarrhea, tachycardia, angina pectoris.
Less frequent: Nasal congestion; flushing; lacrimation; conjunctivitis; paresthesias; edema; dizziness; tremors; muscle cramps; psychotic reactions characterized by depression, disorientation, or anxiety; hypersensitivity reaction including skin rash and vascular collapse; constipation; difficulty in micturition; arthralgia; dyspnea; paralytic ileus; lymphadenopathy; splenomegaly.
Hydrochlorothiazide: See hydrochlorothiazide section above.
DOSAGE
Esimil
Optimal dosage must be determined for each individual. *Note:* 10 mg guanethidine monosulfate present in Esimil is equivalent to 8.4 mg guanethidine sulfate USP (Ismelin®).
Before starting therapy, consult complete product literature.
Ser-Ap-Es
One or 2 tablets t.i.d. To initiate therapy, 1 tablet t.i.d. is recommended. For maintenance, adjust dosage to lowest patient requirement. When necessary, more potent antihypertensives may be added gradually in dosages reduced by at least 50 percent.
HOW SUPPLIED
Esimil
Tablets (white, scored), each containing 10 mg guanethidine monosulfate and 25 mg hydrochlorothiazide; bottles of 100.
Ser-Ap-Es
Tablets (dark salmon pink, dry-coated), each containing 0.1 mg reserpine, 25 mg hydralazine hydrochloride, and 15 mg hydrochlorothiazide; bottles of 100 and 1000.
Consult complete literature of both products before prescribing.

CIBA Pharmaceutical Company
Division of CIBA-GEIGY Corporation
Summit, New Jersey 07901

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CIBA

Drug Taking Found Common in Children World-Wide

Medical Tribune World Service

AMSTERDAM—Drug taking among children and adolescents was one of the main preoccupations at the 30th International Congress on Alcoholism and Drug Dependence here.

British participants drew particular attention to the persistent use of amphetamines and the marked trend towards experimentation with a variety of drugs.

"There is probably not a school in the whole of the United Kingdom in which drug experimentation does not take place," Dr. H. Dale Beckett, chairman of the British Association for Prevention of Addiction, told the gathering of about 1,200 doctors, researchers, and social workers.

Dr. Beckett, who is consultant psychintrist at Cane Hill Hospital, Surrey, declared that there is now an acute need for a voluntary preventive program that would be more concerned with educating teachers, parents, and the general public to cope with the situation than with setting up expensive institutions and specialized services.

I. Hindmarch, Ph.D., Lecturer in Psychology at Leeds University, reported that a survey of attitudes toward drugs among 1,126 schoolchildren, which he recently completed, confirmed earlier findings that 6 to 10 per cent of adolescents in Britain were taking drugs for other than medical reasons.

Comparing trends among university and college students with those among schoolchildren, he said that whereas the former are characterized by their indulgence in cannabis, the latter favor the stimulant drugs. The use of amphetamines, by far the most popular drug in the survey, was particularly worrying, he commented, since they are drugs of dependence that cause an escalation of dosage in a relatively short time.

Dr. Hindmarch's research on the youngsters' attitude towards drugs showed: 61 per cent thought that drugs are all right if taken occasionally; 58 per cent, that they are an aid to creative people; 62 per cent, that they are not so dangerous as the newspapers make out; and 44 per cent, that it is safer to drive with someone high on marijuana than drunk on alcohol.

Dr. Robert Kramer, Associate Professor of Pediatrics at the University of Connecticut, reported on an adolescence dependency pilot program started at the university in 1970, in which 86 young drug takers were studied. He concluded, he said, that there is true drug dependency among adolescents; that they become as antisocial as their adult counterparts, resorting to stealing, dealing, and prostitution; that they tend to be of above average intelligence; and that, finally, they are capable of change and are able to participate in rehabilitation programs.

Methadone

At a press conference, Harold Aksne, a member of the executive center of the U.S. National Association for the Prevention of Addiction to Narcotics, reported an 80 per cent success rate with methadone. There is no doubt, he said, that methadone is a valuable aid in the gradual elimination of heroin and morphine cravings, but as it is itself an addictive drug, its use should be under strict medical supervision.

Dr. L. H. Bronson, of the Cleveland Center on Alcoholism and Drug Abuse, said that "the prolonged use of low doses of methadone may be justified, as a means of keeping a person in treatment until social rehabilitation has been accomplished," but that high-dose methadone maintenance has many disadvantages. One, he noted, is that the period required for withdrawal and detoxification can be very lengthy.

Experience has shown, he said, that 60 to 65 per cent of patients benefit from the low-dose regimen of 10 to 30 mg. daily for from several weeks to a year.

Fears about the effects of methadone on pregnant women were discounted by Drs. George Blinick and Robert Wallach, of the Beth Israel Medical Center, New York.

They found that women treated with large doses of methadone showed regular menstruation, ovulation, conception, and pregnancy. One-third of their babies weighed less than 2,500 Gm. and were therefore, in weight terms, premature, they reported, but no congenital abnormalities were found and so far there seems to be no impairment of physical and intellectual development.

Cannabis

Although experiments on rats by Dr. G. Chesher, of Sydney University, Australia, produced some evidence of the cumulative and tolerance effects of cannabis extracts, a highly complex and detailed study of cannabis smokers by the Alcoholism and Drug Addiction Research Foundation in Ontario suggested that the drug produces little, if any, damage to general physical health.

Among their chief results was evidence that cannabis does not produce dependency and that, although combinations of cannabis and alcohol in above-average quantities tend to impair work productivity, cannabis alone does not seem to do this to any great extent.

Phencyclidine

Among discussions on drugs less commonly used for nonmedical reasons came a warning from Dr. D. Lehman, of the Yeshiva University College of Medicine, that youngsters are now using phencyclidine, or PCP, in the belief that it is a cannabis extract.

The effects of PCP, he said, are unpredictable and lead to central nervous system depression, hallucinations, and all forms of abnormal behavior.

"It is important," he added, "that the medical profession be aware of this drug and its effects on young people in today's drug scene.

Prescribed Drugs

The use of drugs prescribed for medical reasons also came under some discussion, with a warning that psychiatrists are too casual in the extent to which they dole out large quantities of potentially addictive or dangerous drugs.

But a reassuring point was made by the National Institute of Mental Health, which denied that Americans are being "drastically overmedicated." Although a survey found that a sizable minority use medically prescribed over-the-counter psychotherapeutic drugs, few use them on a regular and continuing basis.

There is "an unfortunate tendency to exaggerate the extent of hard-core abuse by considering only the number of people using drugs, while ignoring the manner in which the drugs were used," the report said.

Alcohol

Although the new drug scene in all its hues claimed most attention from outsiders, alcoholism remained a major interest in the congress program. The role of the wife in helping to treat the male alcoholic and the need for her to be encouraged to seek professional help was emphasized by D. I. Meier, alcoholism counselor, of St. Louis.

Dr. R. H. Wilkins, Lecturer in General Practice at Manchester University, England, similarly concentrated on sociologic aspects in a paper that argued that the general practitioner who specifically asks questions about alcohol abuse among patients with certain "at risk" factors would detect a considerable proportion of previously undiagnosed disease.

Dr. M. T. Malcolm, of the Regional Addiction Unit in Moston Hospital, Chester, England, found that implantation of disulfiram was useful in the treatment of chronic alcoholics who had lost the motivation for taking the drug in tablet form.

Panel Asks Immediate End to Syphilis Study

Continued from page 1

of withholding treatment from the infected subjects," the panel concluded.

Yet, since the late 1940s, numerous medical authorities have recommended treatment for syphilis with penicillin in all stages of the disease, including late latent syphilis and tertiary syphilis, it emphasized.

As recently as 1969, a technical and medical advisory panel convened by PHS "is reported to have recommended, with some ambiguity," that the surviving participants not be treated, the panel pointed out.

The panel asserted it had received no convincing evidence that participants were adequately informed about the nature of the research, either at its beginning or subsequently. It urged that PHS immediately inform survivors of the nature of the study.

Arrangements should be made "with all speed" for the health assessment, treatment, and care of all persons included in the study in a suitably adequate, easily accessible facility, the panel said.

Confidentiality Vital

Moreover, every effort should be made to preserve confidentiality with regard to the identification of participants, it continued. PHS epidemiologists should be mobilized to assist in locating all surviving participants as well as others who have been infected as a result of the withholding of treatment from them. Adequate provisions for maintaining the present standards of living of the participants during the evaluation and treatment periods should be undertaken.

At the minimum, any benefits that have been promised to the participants in the past should remain in effect, the panel admonished.

Outlining the role of the Select Specialists Group, the panel said that the group should be composed of "competent doctors and other appropriate persons, with experience in the problems arising from this study."

It should include, but not necessarily be limited to, a dermatologist with experience in syphilology, who will serve as chairman, two internists (at least one of whom shall be a cardiologist), a radiologist, a neurologist, an ophthalmologist, a psychiatrist, a doctor of dental surgery, and a social worker.

It should not include anyone who has had prior connection with the study.

The Select Specialists Group will submit a report about its activities to the panel.

Dr. DeVal said that the panel now will act on two other directives:

- To determine whether the study was justified in 1932 and should have been continued when penicillin became generally available.
- To determine whether existing policies to protect the rights of participants in health research conducted or supported by HEW are adequate and effective and to propose improvements, if needed.

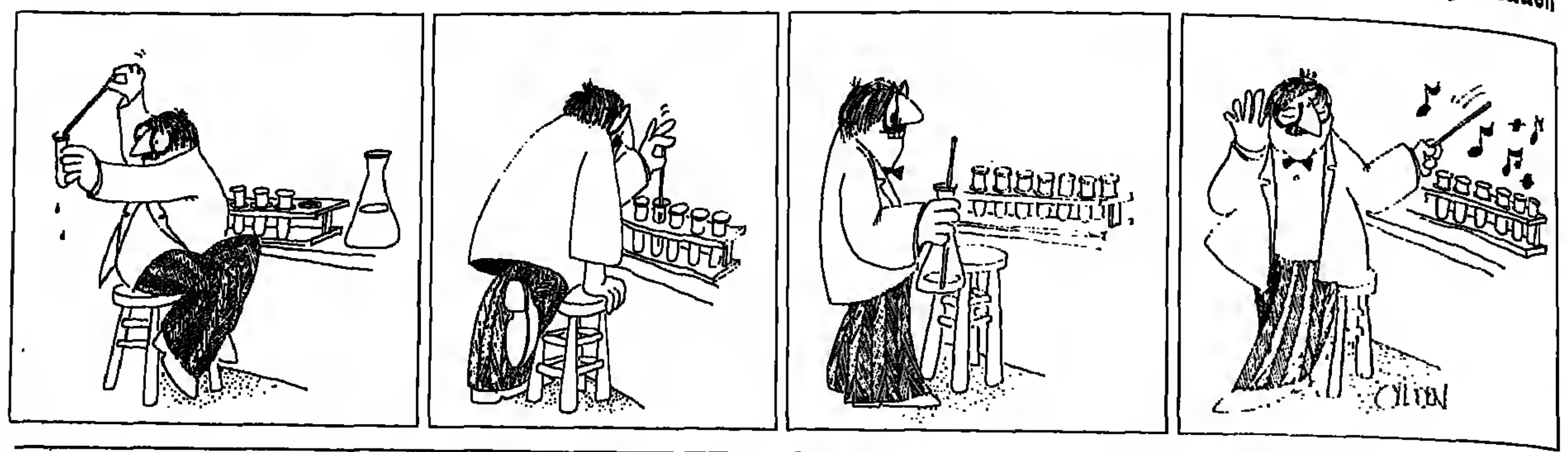
Recommendations by Subcommittee

The panel is formally known as the Tuskegee Syphilis Study Ad Hoc Advisory Panel. The recommendations to end the study and provide all necessary medical care were offered by its Subcommittee on Medical Care, headed by Dr. Vernal G. Cave, director, bureau of vancreal disease control, New York City Department of Health.

Other members of the subcommittee were Ronald H. Brown, general counsel, National Urban League; Dr. Jean L. Harris, executive director, National Medical Association Foundation; Jeanne C. Sinkford, D.D.S., associate dean for graduate and postgraduate affairs, Howard University; Prof. Jay Kntz, Yale Law School; and Fred Speaker, attorney, Harrisburg, Pa.

Clinical Trials

by Oldden



Most Soft-Tissue Sarcomas in Child Believed Curable by Current Methods

Continued from page 1

to. "In fnct, the current management of thesa tumors may be summarized as radical surgery, radical radiation therapy, and radical chemotherapy."

"Dramatic improvements," Dr. Exelby said, hava occurred during the past decade in the cure rate of embryonal rhabdomyosarcoma, "by far the commonest soft-part sarcoma seen in children." From 1960 lo 1967, he reported, only 18 of 94 children wilh lhis lesion at Memorial Hospital were cured, a survival rate of 20 per cent. From 1968 to 1970, when chemotherapeutic agents were first used intensively in thesa patients, 13 oul of 32, or 40 per cent, nre allve more than two years. During the same period, he added, M. D. Anderson Hospital investigators in Houston, Tex., reported a 66 per cent survival rale, uslog surgery, radiation, aod chomotherapy.

Even Greater Improvement

"Although il is still too carly to predicl, it seems that from 1970 oo, when we began combining surgery with radintion therapy and lntensive four-drug chemotherapy," Dr. Exelby declnred, "our results have shown even greater improvement. Out of 12 primary treatablo cases that came to Memorinl between 1970-71, 11 children are living more than 12 months free of discase. This is n one-year-plus survival rate of 90 per cent. Of eight children with advancod or metnstntic disease, four are surviving more than one year, or 50 per cent."

The physician, who is chief of Memorial's pediatric surgical services, noted that hoad and neck lesions, because of their location, are rarely nmenable to surgery but appear to respond "very favorably" to radiation therapy. "Elsewhere ln the body, radical surgical extirpation is the treatmeot of choice for the primary lesion," Dr. Exalby observed. "I must emphasize that the aurgery is still radical, but we are trying wherever possibla to preserve extremities."

Current Experience Described

Describing current experience with fibrosarcoma, Dr. Exelby said that while the cure rate of 90 per ceot is obviously satisfying, "there is a disturbingly high rate of amputation" in these children. Further, the cancer is extremely difficult to eradicate because of the tendency to local recurrence. In the Memorial Hospital series of 22 cases the average number of recurrences was three, and 30 per ceot of the tumors recurred as often as five times.

Synovial sarcomas, Dr. Exelby said, are about as common as fibrosarcomas, occurring primarily as a tumor of youog adults. Of 12 primary cases seen at the hospital, he continued, nine patients are living three to 30 years after treatment, free of disease. Only two of 13 patients who were admitted with metastatic disease are alive five years after treatment.

"We are undoubtedly making great progress in the management of soft-part sarcomas in children and are now in a position to say that we can cure many of these tumors, if diagnosed and treated early," Dr. Exelby concluded. "It must be emphasized that any lump or abdominal mass on a child must be excised aod histological diagnosis mado at the earliest possible opportunity. Tha improvement in oor results is undoubtedly due to tha combined aggressive treatment of these children by tha surgeon, radiotherapist, and chematherapist."

RESULTS OF TREATMENT

Year	Number of patients	Treatment	Cure
1960-1966	73	Surgery &/RT	18%
1967-1969	38	Surgery &/RT + Chemotherapy	36%
1970-1971	15	Surgery and/or RT +4 drug Chemotherapy	73% (NED 1yr +)

TRIBUNE SPORTS REPORT

Greater Sports Participation Suggested for the Retarded

Medical Tribune World Service

MONTREAL—Increased sports participation for retarded children was urged here at the fifth International Congress on Mental Retardation by Frank J. Hayden, Ph.D., Professor of Physical Education at the University of Western Ontario, London, Ont.

The retarded have been denied athletic opportunities because it was assumed that they are incapable of being athletes, he said; yet their strength and endurance could be radically developed by physical education.

"About 2,500 competed in the third International Special Olympics in 1971 in Los Angeles," he related. "In 1972, 40,000 competed at state-level meets. This year, 300,000 retarded youngsters competed in local and area games in over 2,000 communities across the United States, Canada, and France. Every indication is that their lives are richer for the experience."

Many retarded, Dr. Hayden said, have been overprotected, with consequent impairment of their fitness. He continued:

"Although their average levels of physical fitness are deplorable, they can be improved drastically and rapidly. The average strength and endurance of trainable retarded youngsters can be increased by half with one hour per week of physical education over a seven-month period."

Other congress participants in the sports panel were in agreement that all countries are underdeveloped when it comes to care for the retarded. Those mildly retarded (I.Q. 67-52) are readily acceptable in normal sports programs, but almost everywhere, it was stated, a great need exists for facilities, services, and understanding for those below that level.

The consensus was that such activities can have beneficial effects across a wide range of disability not only with respect to physical fitness, but also with respect to social relationships, personal development, improved self-image, motor ability, perceptual motor skills, and self-confidence.

Swiss Paraplegia Expert To Join Harvard Faculty

Medical Tribune Report

BOSTON—Dr. Alain B. Rossier, a Swiss specialist in the treatment of paraplegia and quadriplegia, will become Professor of Social Medicine and Spinal Cord Rehabilitation in the Faculty of Medicine at Harvard University next March, it was announced here.

A paraplegic himself as a result of a diving accident, he has been granted a certificate of registration by a special act of the Massachusetts Legislature to enable him to practice in the United States.

DR. ROSSIER

The Harvard announcement said that Dr. Rossier, the first man to be trained especially as a spinal traumatologist, is currently director of the spinal cord injury service of the University of Geneva, Switzerland, which he established in 1964 and has built into one of the world's outstanding paraplegic units and one of the few closely connected to a medical school.

IMMATERIA MEDICA

The Mail

• Is *Holiday Magazine* joining the pornos?

Dr. Sam A. Nixon of Floresville, Tex., has sent us a promotional letter from the magazine's executive editor that says: "With a fervor we edit out any un-American, un-immoral or un-happy thinking."

• That other Texas contributor, the Nit Picker, reports considerable puzzlement caused by the following sentence in *J.A.M.A.*:

"Then, under fluoroscopic control, a radiologist can introduce with caution a small amount of a powdered solution of diatrizoate sodium (Hypaque sodium) to outline the leak." He asks for help in figuring out what a powdered solution is.

(For what it was worth, we wrote him that during World War II days it was unreliably rumored that the Army was working on dehydrated water; just add water to reconstitute. More useful assistance for the Nit Picker is solicited.)

We follow the pair of Texans with a pair of university public information chaps.

• Jack Oswald, of the University of Miami School of Medicine, sent us an advertisement from *Public Relations Journal* that said:

"In New York, corporate headquarters of Industrial America, the *New York Times* delivers more decision-level executives than any other publication."

(Obstetricians, please note.)

• Arthur Isbit, of Rutgers University, found the following ad in an unnamed paper:

"Rich, testy man seeks smart, gutsy people. The people I'm going to hire wear their guts on their sleeve."

(Gastroenterologists, plastic surgeons, and highly skilled cleaners, please note.)

We have still another pair, this one, D.O.s.

• Dr. Leonard Staff, Jr., of Tempe, Ariz., was taken by a title in an unnamed digest that ran: "Amputated Head and Neck Tissue," as well as a sentence in the piece that said, "This study was undertaken to help us try to establish criteria for replacement of accidentally amputated head and neck tissues."

Those careless guillotines!

• Dr. R. J. Bingham of Toledo, Ohio, found this in still another unnamed publication for, he says, family physicians: "Being prepared for severe reactions with resuscitative equipment and trained personnel serve the patient better than useless protesting."

Turns out that it's a putdown not of Young Turks but of unnecessary protesting.

• The occasional oddity of the British and their laws is illustrated in a *British Medical Journal* piece on the Road Safety Act, sent to us by Dr. Austin M. Brues, of the Argonne National Laboratory.

After discussing the fact that anyone who fails the breathalyser drunkenness test must provide a blood or urine specimen for laboratory testing, *B.M.J.* says:

"But the act does not require that the blood sample be taken from any particular part of the body. Shortly after it came into force a Hertfordshire lorry driver was aquitted by a jury of a charge of failing to provide a sample after he had said that a sample could be taken from his penis but nowhere else. The police doctor had told the jury that to have a sample from such a site might well have led to a malpractice suit against him."

Readers are invited to contribute items of 100 words or less to this column. Contributions should be mailed to MEDICAL TRIBUNE, *880 Third Avenue, New York, N.Y., 10022.*

Toronto Study On Vitamin C Backs Pauling

Continued from page 1

tions." Dr. Anderson's colleagues in the trial were D. B. W. Reid and G. H. Beaton, Ph.D.

Two outstanding, and "quite unexpected," findings emerged from their study, which was reported in the *Canadian Medical Association Journal.*

- Of the 407 volunteers taking 1,000 mg. vitamin C daily, 26 per cent remained free of illness throughout the study, compared with only 18 per cent of the 411 subjects on placebo.
- Furthermore, those in the vitamin group had 30 per cent fewer days of total disability (confinement to the home or absence from work) than those in the placebo group.

The findings of substantially less disability in the vitamin group, the investigators said, "may have important theoretical and practical implications."

"Further studies," they added, "will of course be required to confirm this finding and establish its magnitude more precisely, but the high level of statistical significance associated with it encourages us to believe that it is likely to be a real effect rather than a statistical artifact."

Because of their initial skepticism of Dr. Pauling's claims, they said, they therefore sought to enroll a large number of subjects to "avoid an indecisive negative result." Furthermore, the subjects were instructed to increase their intake to 4,000 mg./day at the onset of cold symptoms, in order to comply with Dr. Pauling's recommendations. Thus, they noted, they added "a therapeutic feature to an essentially prophylactic trial." In addition, as opposed to previously reported short-term studies, they designed their trial to last for several months.

Dr. Pauling

Only subjects who normally experience at least one cold in the January-March period (the period in which the trial was to be conducted) were admitted to the program. The two groups of subjects, vitamin and placebo, were found when the code was broken to be remarkably closely matched as to age, sex, occupation (student or other), smoking habits, number of colds normally, the frequence that they were in crowds, and ingestion of other vitamins and fruit juices.

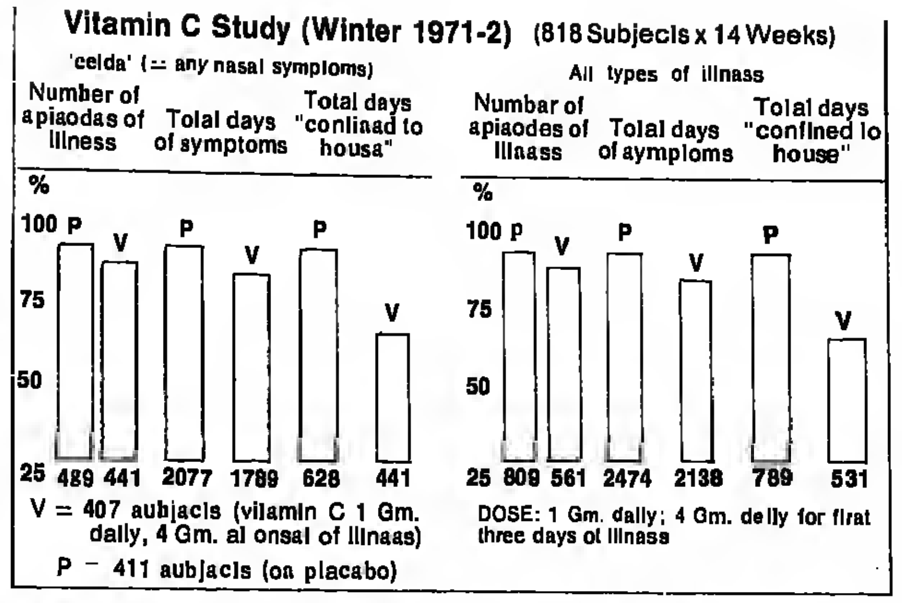
Calender-Type Record Kept

The subjects turned in a calendar-type record sheet each month indicating for each day whether they were sick or well, the number of tablets taken (the vitamins and placebo were identical in appearance and taste), and on days of illness the sites of symptoms (nose, throat, and chest), the presence of malaise or chills, and, if possible, temperature.

The 818 subjects who were the basis of the study were in the program for at least two months and presented complete personal and sickness records for analysis. For the vitamin group, the mean number of days in the study was 103.2; for the placebo subjects, it was 101.9.

It was found that the mean number of episodes of illness was 7 per cent lower and the mean duration of symptoms (days of symptoms per episode) 5 per cent less in the vitamin group than in the placebo group, but the investigators said the differences were not statistically significant.

While generalized constitutional symptoms—severe malaise, chills, and fever—appeared markedly less frequent in the vitamin subjects than in the placebo group, it was found that local symptoms (referable to nose, throat, and chest) showed less striking differences. The reduction in disability in the vitamin group, the investigators said, appeared to be due to the lower incidence among them of constitutional symptoms.



It is necessary, the investigators said, "to establish the most appropriate dosage levels, the relative importance of the prophylactic and therapeutic features, and the safety of prolonged ingestion of large doses of ascorbic acid or its salts."

These are questions that trials planned for this winter will seek to answer, Dr. Anderson told Medical Tribune.

They expect to study nine groups of 400 subjects each, he said. They will examine the effects of different dosages and different dosage schedules. The daily dose schedule will range from 250 mg. to 2 Gm. The dosages at onset of cold symptoms will range from 1 to 8 Gm.

The subjects will remain on their regimen for three months, Dr. Anderson said, and during the fourth month they will be off the regimen but will be questioned to "determine whether there is any rebound effect in those who were on high doses of vitamin C—that is, where they have perhaps become dependent on the vitamin."

Pauling Gives Concept Of a Valid Trial

In an exclusive interview last January, Dr. Linus Pauling outlined to Medical Tribune his concept of a "scientifically valid trial" of his hypothesis.

"The best test [of the protective effect of vitamin C]," he said, "would be one that entails exposure to cold infection, using several hundred subjects and higher doses of ascorbic acid."

The Nobelist, who said that he was willing to have his hypothesis stand or fall by the results of such a trial, had criticized some earlier studies because the vitamin C dose was too small and a potent viral challenge had been employed, instead of exposing patients to the natural disease.

He predicted that a study design based on his views would give statistically significant evidence that ascorbic acid may be protective against colds.

Pauling's Critics Advised To Read Work, Study Trials

Medical Tribune World Service

Ottawa—Critics of Linus Pauling's views on vitamin C and the common cold would do well both to read his work thoroughly and to study the available trials on the effects of ascorbic acid in reducing the incidence and severity of the ailment in subjects exposed to the cold virus in the usual way, Dr. R. M. Preshaw, of the Department of Physiology at the University of Toronto, suggested in an editorial in the *Canadian Medical Association Journal.*

When Dr. Pauling's *Vitamin C and the Common Cold* appeared last year in paperback, he noted, "it was treated rather harshly by most of the reviewers in the medical press."

"Secure in the knowledge that vitamin C had been unsuccessfully put forward as therapy more than two decades ago for everything from cervical erosions to automobile accidents, the brave critics petulantly complained about the scarcity of experimental support for Pauling's theories," Dr. Preshaw wrote.

Parenthetically, he remarked that "the good professor struck back with several devastating replies to reviewers whose comments had contained more fancy than fact."

Those who "took time out from the fray" to read Dr. Pauling's paperback thoroughly, he said, "were impressed by a lucid and reasonable argument, contained in a monograph which might serve as a model for elementary instruction in scientific matters."

Dr. Pauling had relied, Dr. Preshaw pointed out, on four independent double-blind studies on the effects of regular ingestion of ascorbic acid in amounts greater than 100 mg. daily, in comparison with a placebo, in reducing the incidence and morbidity of the common cold.

The latest study, by Anderson, Reid, and Beaton (see page 1), Dr. Preshaw noted, is a fifth randomized clinical trial, one using the larger dosages recommended by Dr. Pauling. A significant finding, he emphasized, was the difference in the number of subjects who remained free of illness throughout the period of study—18 per cent of the placebo group against 26 per cent of those taking ascorbic acid.

Small-Dose Trials Published

Dr. Preshaw observed that several "acceptable" trials of much smaller doses have been published. "The results," he commented, "may be interpreted as scoring two in favor and three against the proposal that ascorbic acid in these doses is useful therapy for colds." The failure of vitamin C (3 Gm. per day) to alleviate the miseries of the common cold in a trial by a group of general practitioners in England, he continued, "would seem to tip the scales further against the value of ascorbic acid."

But the study by G. Ritzel, conducted at a ski school in Switzerland, and now the study by Dr. T. W. Anderson and his colleagues, indicating that larger doses are of value in the therapy of upper respiratory infections, "return the scale to balance."

Furthermore, he added, Dr. Anderson's group reported "that subjects receiving ascorbic acid were confined to the house with nonrespiratory ailments significantly less than persons taking the placebo."

Microbiologist Throws Light On Flu Vaccine

Medical Tribune Report

New York — In order to throw more light on the continuing controversy over the influenza vaccine, the most promising new lines of research into providing immunization, and the degree of vulnerability in the United States in the case of an influenza outbreak this winter, Medical Tribune interviewed Dr. Edwin T. Kilbourne, Professor of Microbiology and chairman of the department at Mount Sinai School of Medicine. Dr. Kilbourne is a leading researcher in the development of the current influenza vaccine.

Could you explain what "recombination" involves?

All influenza A viruses—and these are the ones we are chiefly concerned with as far as causing disease in man—can participate in a genetic interchange. "Recombination" represents this genetic interaction between related but somewhat dissimilar influenza viruses. Induced in the laboratory, recombination takes advantage of this genetic lability of the virus, in order to harness it for human purposes; instead of empirically selecting viral strains for use in a vaccine, we try to tailor-make the strains we want. Since the influenza virus keeps mutating (the magnitude of which is a characteristic in contrast to all other infectious diseases), we have the unique problem of having to create, every few years, a new vaccine that antigenically matches the influenza virus each time it changes. Recombination thus has involved combining the specific antigenicity of a new strain with the ideal growth characteristics of another strain, which makes production of a vaccine economically feasible.

Dr. Kilbourne

The actual mechanism of recombination is quite simple. It's brought about by the simultaneous infection of chick embryos or tissue cultures with the viruses we wish to use as parents, and from the mixed yield of such an infection we screen out by various selective methods the strain that meets the desired specifications.

I'd like to point out that most of the vaccines currently used in this country involve the use of such a recombined virus that we developed, the X-31. I believe that, currently, four out of the six American manufacturers are using the X-31 (Hong Kong) strain as their vaccine.

Does the new "England strain" recently isolated represent a major change in antigenicity from the Hong Kong strain, and thus does it threaten the United States this winter?

Although this is the biggest change we've had in this post–Hong Kong period, it still could not be called a "major change." It's nothing like the change, for example, from Asian to Hong Kong; it is enough of a change, however, to probably compromise existing immunity to some extent. It therefore will be a threat to the United States, particularly to those parts of the country that have not had recent experience with the Hong Kong strain. I would suspect that the England strain is close enough to the original Hong Kong strain so that vaccination with present vaccines would probably be effective, although somewhat less effective than it would be against the Hong Kong strain. The present vaccine, which is the Hong Kong variety, is definitely worth using.

Conclusion in Next Issue of Medical Tribune